IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

VERTICAL COMPUTER SYSTEMS, INC.,	§	
	§	
Plaintiff,	§	
	§	Civil No. 2:10-CV-00490-WCB
v.	§	
	§	Hon. William C. Bryson
SAMSUNG ELECTRONICS CO., LTD.,	§	
SAMSUNG ELECTRONICS AMERICA,	§	**JURY TRIAL DEMANDED**
INC.,	§	
	§	
Defendants.	§	
	§	
	§	

DECLARATION OF MONTY MYERS IN SUPPORT OF DEFENDANTS' MOTION FOR SUMMARY JUDGMENT OF INVALIDITY OF U.S. PATENT NOS. 6,826,744 AND 7,716,629

I, Monty Myers, declare as follows:

Background/Qualifications

1. My name is Monty Myers, and I have been retained as a technical expert by the Defendants to analyze and provide opinions on invalidity and infringement regarding U.S. Patent Nos. 6,826,744 and 7,716,629.

2. I am the founder and CEO of Eureka Software Solutions Inc. ("Eureka"). Now in its 27th year, Eureka is a recognized project-oriented, custom software development company based in Austin, Texas. The company has built software products and business solutions for a client list which includes members of the Global 1000, Fortune 500, notable private companies, and numerous high-profile start-up organizations. Eureka specializes in business-critical, distributed software solutions and was a pioneer in developing Web-based applications. Of particular note to this matter is Eureka's past experience with: a) software development lifecycles/processes and software product evolution, and b) intellectual property related expert analyses. Eureka has a highly successful track record of providing enterprise-class solutions on a variety of technology platforms, such as Microsoft/.Net, Java/J2EE, embedded systems, and others, and has been closely involved in assisting a number of its clients with developing and refining their software and technology product strategies and approaches. The company is known for both the breadth and depth of its software development capabilities. Eureka has enjoyed significant business success and has been recognized on several "fastest growing company" lists.

3. As the leader of Eureka, I have negotiated hundreds of software/technology agreements most of which involved substantial intellectual property aspects and critical software project performance terms and conditions. From a software project execution standpoint, I have personally written and overseen the development of millions of lines of custom software source code for solutions in a wide range of industries and purposes. I have experience working with both large and small companies as they develop, acquire, and sell software solutions and I am familiar with the considerations surrounding such activities.

4. I began my formal computer programming education in middle/high school, and my software development career spans 30 years. I received my Bachelor's degree with Cum Laude honors in Engineering from Texas A&M University in 1986, and performed substantial graduate level course work at the University of Texas at Austin. I am a licensed Professional Engineer in the State of Texas and I hold patents in the area of load and performance testing for distributed Internet applications. By the time the applications for the asserted patents were filed (October 1, 1999), I had substantial experience in the development of computer applications.

5. Over the last six years, I have served as both a consulting and testifying expert on approximately thirty-five litigation matters. The litigation matters that I have been involved in during the last four years are listed on Exhibit A.

6. My efforts in this case have been focused on the issues of invalidity and non-infringement of the asserted claims of the '744 and '629 patents in suit. I have produced an initial expert report on invalidity in this matter dated January 8, 2014, a non-infringement report dated February 3, 2014, and a supplemental report on invalidity in this matter dated February 4, 2014. My findings opinions contained herein are supported by the information and facts cited herein as well the entire body of my January 8, 2014 report, February 3, 2014 report and February 4, 2014 report.

7. As part of my work on this engagement, I conducted an interview of Bryan Bunch, the Vice President of Information and Technology for Walls New Media from 1997-2008 and a customer and user of Adhesive Software's Newsflash product. The following background and facts regarding Mr. Bunch and the Newsflash software used by Walls New Media are based on such interview as well as my review of a deposition of Mr. Bunch in a related lawsuit. Mr. Bunch oversaw all the technology Walls New Media used or was involved in. Mr. Bunch was involved in bringing all of Walls New Media's papers online using Newsflash. He was also the first line of support for all of the papers website issues after Walls New Media brought them online.

8. Mr. Bunch informed me that Walls New Media's purchases from Adhesive Software included the server that was used to host all of their newspapers sites. The server was shipped to Adhesive, who put all the software on it. That server was then used to support all of Walls' newspapers.

9. In the summer of 2008, Mr. Bunch created and delivered to Weil, Gotshal, & Manges a working copy of the NewsFlash software version 4.0 on CD/DVD media. It is my understanding that this production, [SAMSUNG_VERT00000001], was created from a backup of the actual production server running Adhesive's Newsflash implementation at Walls New Media powering the various Walls Media online newspaper websites. From my conversations with Mr. Bunch, it is my understanding that for simplicity, he removed several newspaper websites from the CD/DVD. However, the Newsflash software and select websites made available in the configuration are a complete backup/restoration of the Walls *live* Newsflash software system that operated continuously from around 1997 through 2008. According to Mr. Bunch, the product installed by Adhesive in late 1997 (contract was signed September 1997) was fully capable of supporting Walls, and other than speed and performance improvements, Mr. Bunch did not recall Adhesive offering or demonstrating any material new and compelling features or capabilities in newer versions.

10. Having been provided this copy of the Newsflash software, a portion of my analysis was performed using this actual operating host system complete with a fully functional version of the Newsflash software. The CD/DVD disc provided to me contained 1) a standard virtual machine image containing the restored Newsflash system, 2) written instructions describing the contents of the disc, and 3) a video file presenting step by step instructions for properly installing, configuration, and accessing the Newsflash software contained therein. A virtual machine image (or VM) is a fully self-contained computing environment configured in such a way as to run in a protected sub-environment of a virtual machine host. In this case the virtual machine image provided to me was compatible with commercially available virtual machine host software made by VMWare, a product my team and I are quite familiar with.

Following the instructions provided, my team successfully installed, configured, and provided me with ready accessed to the functioning Newsflash system with little difficulty. Thus, many aspects of my analysis were performed with the benefit of *hands on* evaluation and experimentation with the actual software materials relating to Newsflash.

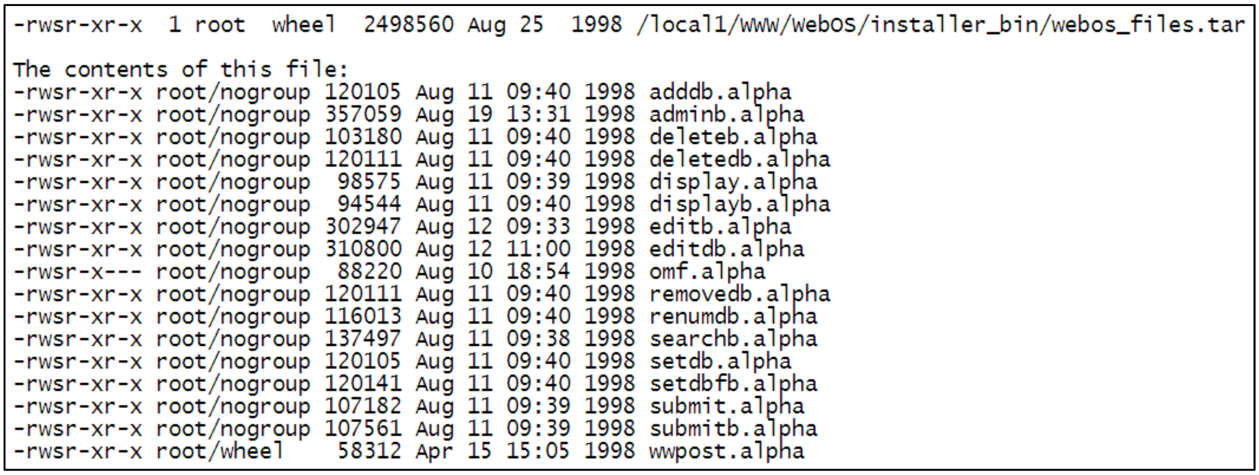
11. The virtual machine contained a fully functional and operable installation of the open-source FreeBSD host system. From my analysis I determined the host system was FreeBSD Version 3.5.1 (Oct 20, 2007). The host system appears to have been created/installed on May 27, 2008. The host system contained the typical array of tools, programs, editors, libraries, shells, services, and other support software one normally expects to find on a standard UNIX host system. Nothing unusual or out-of-the ordinary was evident regarding the host system. Installed on the host was a fully operable copy of the open-source Apache Web Server, version 1.3.41 (UNIX). The web server was installed in typical fashion and was configured to serve websites related to hosting the Jasper Mountain Eagle, the Bolivar Commercial, the Herald Citizen, the Monett Times, the Valley Times, the Abilene Reflector Chronicle, the Daily Tribune, the Madison Press, and the Cleveland Daily Banner.

12. The Newsflash installation on the host system was located in the /local1 directly of the root files system. Within the Newsflash installation, I inspected various versions of the WebOS binaries, one set of which was properly configured to process html request for the configured websites. I also inspected a number of object library files and the inline and underlying objects encapsulated, html container pages, content files, WebBase database storage files, UNIX shell scripts, binary files, CGI programs, and others. Additionally, I located several tape archive files both compressed (tgz) and uncompressed (tar). I also inspected configuration and the server side components necessary to allow Adhesive's WebOS Studio object management tool to manipulate objects in the configured sites. With regard to the Newsflash runtime files available in the production, I observed file modification dates ranging from as early as April 15, 1998 to as late as October 4, 1999. There were approximately 70,000 files in the Newsflash directory structure of the host system. I was also to identify approximately 206

container page templates and approximately 863 arbitrary objects. In addition to these files, I inspected a number of *user accounts* and reeled *home* directories as well as a number of scripts and background (or *cron)* jobs related to operating the content management workflow processes provided by Newsflash.

13. Throughout my analysis efforts, I relied heavily on this operable version of Newsflash. My team and I observed the system functionality as it was designed and configured at Walls New Media, and we were able to trace and understand the system's execution and operational characteristics. My team was also able to conduct static analysis procedures on the materials to support my conclusions. Additionally, my team and I utilized this Newsflash implementation to create and test functionality through demonstrative uses of the system which facilitated additional understanding. And, to confirm my understanding of the capabilities of the Newsflash product, my team and I finally endeavored to create and successfully exercise many of the relevant features of Newsflash available in the production.

14. I performed an analysis of runtime versions of the object management framework ("OMF") made available by Bryan Bunch, as contained on the Walls Media Newsflash host server. The runtime versions of OMF provided by Mr. Bunch include a version that pre-dated the application date of the asserted patents by more than one year, as shown by the modification dates of the files comprising this version of OMF:



```
-rwsr-xr-x  1 root  wheel  2498560 Aug 25  1998 /local1/WWW/WebOS/installer_bin/webos_files.tar

The contents of this file:
-rwsr-xr-x root/nogroup 120105 Aug 11 09:40 1998 adddb.alpha
-rwsr-xr-x root/nogroup 357059 Aug 19 13:31 1998 adminb.alpha
-rwsr-xr-x root/nogroup 103180 Aug 11 09:40 1998 deleteb.alpha
-rwsr-xr-x root/nogroup 120111 Aug 11 09:40 1998 deletedb.alpha
-rwsr-xr-x root/nogroup  98575 Aug 11 09:39 1998 display.alpha
-rwsr-xr-x root/nogroup  94544 Aug 11 09:40 1998 displayb.alpha
-rwsr-xr-x root/nogroup 302947 Aug 12 09:33 1998 editb.alpha
-rwsr-xr-x root/nogroup 310800 Aug 12 11:00 1998 editdb.alpha
-rwsr-x--- root/nogroup  88220 Aug 10 18:54 1998 omf.alpha
-rwsr-xr-x root/nogroup 120111 Aug 11 09:40 1998 removedb.alpha
-rwsr-xr-x root/nogroup 116013 Aug 11 09:40 1998 renumdb.alpha
-rwsr-xr-x root/nogroup 137497 Aug 11 09:38 1998 searchb.alpha
-rwsr-xr-x root/nogroup 120105 Aug 11 09:40 1998 setdb.alpha
-rwsr-xr-x root/nogroup 120141 Aug 11 09:40 1998 setdbfb.alpha
-rwsr-xr-x root/nogroup 107182 Aug 11 09:39 1998 submit.alpha
-rwsr-xr-x root/nogroup 107561 Aug 11 09:39 1998 submitb.alpha
-rwsr-xr-x root/wheel    58312 Apr 15 15:05 1998 wwpost.alpha
```

15. After reviewing the documents in this case, speaking with Bryan Bunch, and examining the code and operation of portions of the software myself, I have acquired an understanding of the background of the Newsflash software. Newsflash worked by integrating together several components. The components were:

- Content storage on a central server (e.g., text of articles, photographs, advertisements, audio, video, and the like).
- Web server software
- Server operating system
- Newsflash databases
- WebOS Platform

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16. My conversation with Bryan Bunch has also provided me with helpful background. All of Walls Newspaper sites were hosted on a single server. They shared an object library, and also had libraries specific to each site. One of the simplest examples of an object that would be stored in the master object library is a date object, which was shared among the sites. Templates were stores in files, such as a header file, footer file, and a loop file. When learning Newsflash and afterwards, Mr. Bunch used command line entry instead of WebOS Studio because WebOS Studio was too prone to bugs. WebOS Studio was also not used to edit articles. Instead, articles were held in a database and were accessed by a query object. Over time, the core functionality of Newsflash stayed basically the same. McAuley was in charge of setting up the sites. Bryan Bunch would create his own objects when needed. In my conversations with Bryan Bunch, he told me that one of the objects discussed were so-called “dynamic objects.” If he was dealing with extremely complex objects, he’d ask McAuley.

17. While training Bryan Bunch, Adhesive provided him with the WebOS 4.0 Training Manual around June 9th, 1998. 10/24/12 Bunch Dep. Tr. at 45:4-8 at SAMSUNG_VERT00060236. Counsel informs me that Mr. Bunch provided this document to Samsung's counsel. Bryan Bunch used this document to train Walls New Media's newspapers how to use WebOS for their paper's sites. *Id.* at 43:6-9 ("By this time, we already knew how to use the product. We mainly used these users guide for the newspapers to teach them how to use it."). The WebOS 4.0 reference manual is entitled, "WebOS 4.0 User's Guide, Revision 1.4, June 9th, 1998." (SAMSUNG_VERT00060278 – 00060333). The face of the document also displays the following notice, "Copyright 1998 by Adhesive Software, Inc." *Id.*

Level Of Ordinary Skill

18. I was asked to give an opinion as to the educational and/or vocational qualifications of one of ordinary skill in the subject matter taught by the patents at the time of the invention. I understand that the factors that may be considered in determining level of ordinary skill in the art include: (1) the educational level of the inventor; (2) the type of problems encountered in the art; (3) prior art solutions to those problems; (4) the rapidity with which innovations are made; (5) the sophistication of the technology; and (6) the educational level of active workers in the field.

19. In the 1999 time period covering the application filing date of the first patent-in-suit, a hypothetical person of ordinary skill in the art to whom this patent is addressed would have had a range of knowledge roughly equivalent to the knowledge and/or training of a person holding the degree of Bachelor of Science in Computer Science or Engineering with 3 years of applicable experience in the development of computer applications, or someone who has 4 to 7 years of applicable experience in the development of computer applications.

20. In reaching this opinion as to the qualifications of the hypothetical person of ordinary skill in the art, I have considered the types of problems encountered in the art, the prior art solutions to those problems, the velocity with which innovations are made, the sophistication of the technology, and the educational level of active workers in the field. Additionally, I meet

this definition of ordinary skill in the art and had at least ordinary skill in the art on October 1, 1999, the date to which the asserted patents claim priority.

Newsflash Anticipation Analysis

21. In my opinion, there is clear and convincing evidence that the asserted claims of the ’744 and ‘629 patents are invalid as anticipated by the Adhesive Newsflash system (“Newsflash”), as described by the implementation of Newsflash (which included WebOS 4.0) by Walls New Media, Inc. for multiple newspaper Web sites including the Daily Mountain Eagle Newspaper Web site (the “Walls Newsflash”) (SAMSUNG_VERT00000001) and the WebOS 4.0 User’s Guide (SAMSUNG_VERT00060278 – 00060333).

22. The basis for my opinion is described below.

23. It is worth noting that the ‘744 Patent actually references Adhesive Software’s WebOS as an embodiment of the invention, and it is my opinion that Newsflash is consistent with that conclusion. As described previously, Adhesive Software’s Newsflash software product utilized and was built upon Adhesive’s WebOS software for building and maintaining the dynamic Web sites of newspaper publishers.

The Asserted Independent Claims

Claim 56 of the ‘744 Patent

24. For the reasons set forth below, it is my opinion that there is clear and convincing evidence that Newsflash anticipates claim 56 of the ‘744 patent.

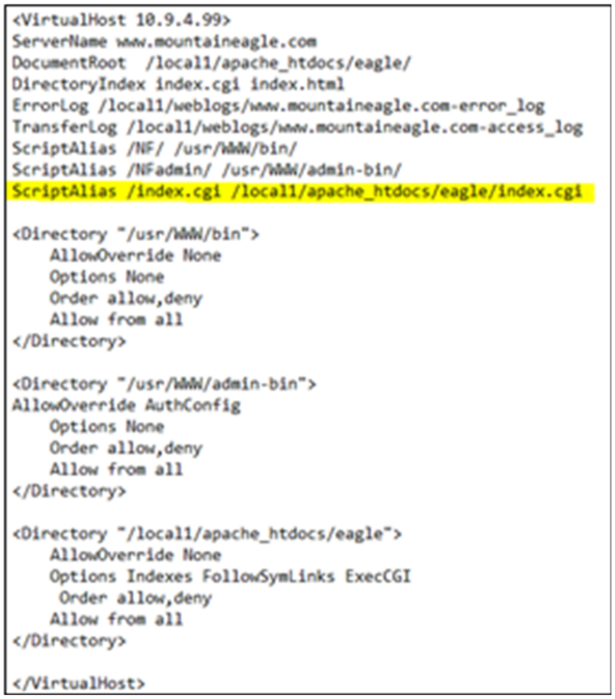
> **(Preamble) “A method for generating a computer application on a host system in an arbitrary object framework that separates a content of said computer application, a form of said computer application and a functionality of said computer application, said method comprising.”**

25. The preamble of claim 56 of the ‘744 patent contains three distinct elements: (a) generating a computer application on a host system; (b) in an arbitrary object framework; (c) that separates a content of said computer application, a form of said computer application and a functionality of said computer application. Newsflash clearly discloses each of these elements.

(Generating on a Host) "Generating a computer application on a host system"

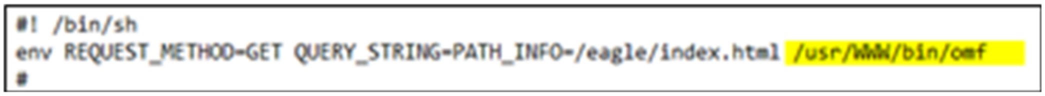
26. Newsflash clearly discloses a method of generating a computer application on a host system as follows:

27. The Walls Newsflash Apache Web Server was configured to call the WebOS Object Management Framework (OMF), which implemented a design framework responsible for generating a computer application on the host system. The following information extracted from the Apache configuration at `/local1/apache/conf/httpd.conf` shows the Walls Newsflash working in conjunction with Apache to generate an application on a host system:



```
<VirtualHost 10.9.4.99>
ServerName www.mountaineagle.com
DocumentRoot  /local1/apache_htdocs/eagle/
DirectoryIndex index.cgi index.html
ErrorLog /local1/weblogs/www.mountaineagle.com-error_log
TransferLog /local1/weblogs/www.mountaineagle.com-access_log
ScriptAlias /NF/ /usr/WWW/bin/
ScriptAlias /NFadmin/ /usr/WWW/admin-bin/
ScriptAlias /index.cgi /local1/apache_htdocs/eagle/index.cgi

<Directory "/usr/WWW/bin">
    AllowOverride None
    Options None
    Order allow,deny
    Allow from all
</Directory>

<Directory "/usr/WWW/admin-bin">
AllowOverride AuthConfig
    Options None
    Order allow,deny
    Allow from all
</Directory>

<Directory "/local1/apache_htdocs/eagle">
    AllowOverride None
    Options Indexes FollowSymLinks ExecCGI
     Order allow,deny
    Allow from all
</Directory>

</VirtualHost>
```

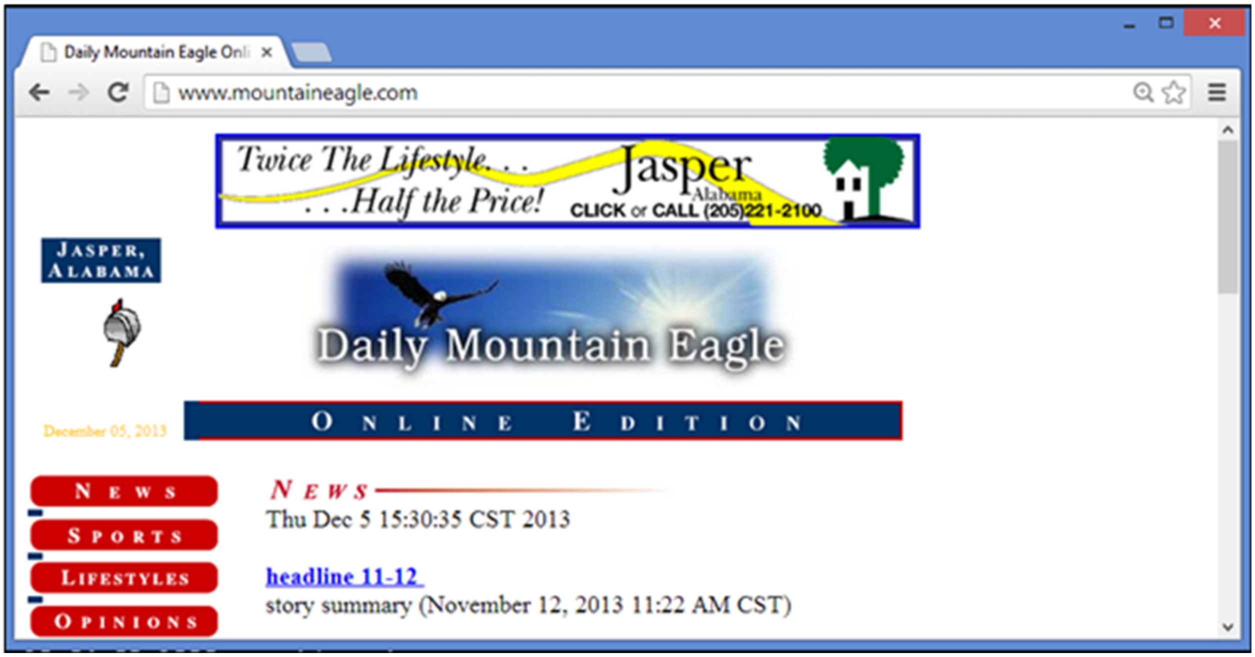
28. Further, the file referred to in the configuration, /local1/apache_htdocs/eagle/index.cgi, specifically calls the Walls Newsflash OMF for requests:



```
#! /bin/sh
env REQUEST_METHOD=GET QUERY_STRING=PATH_INFO=/eagle/index.html /usr/WWW/bin/omf
#
```

29. The executable program called OMF was the engine used by the Walls Newsflash as the method of generating applications and each time a call was made to the server, the Walls Newsflash built/generated and delivered a computer application, in this case a website, which

was displayed on the end users computer. The output screen below demonstrates the operation of the capabilities of the August 1998 OMF engine. The dates on the screen merely reflect the dates when the expert team was demonstrating these capabilities.



News

Thu Dec 5 15:30:35 CST 2013

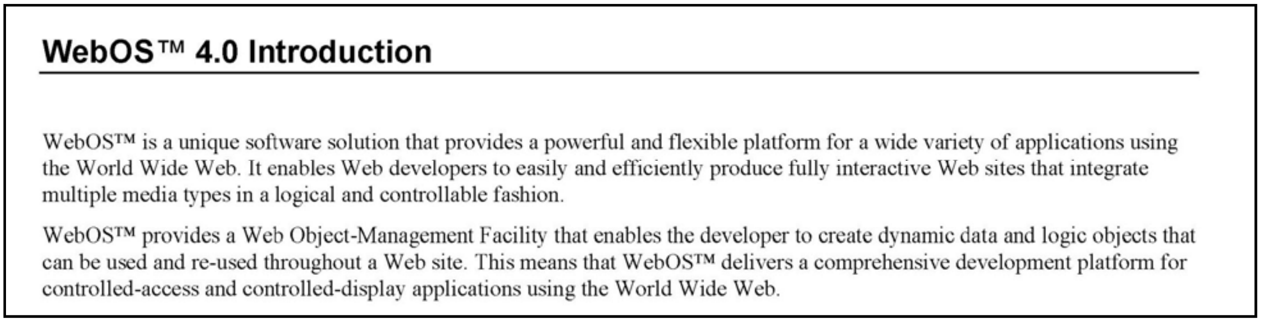
headline 11-12

story summary (November 12, 2013 11:22 AM CST)

30. One of ordinary skill in the art will readily understand that the Walls Newsflash implementation was a host based system served through the Apache Web server working in conjunction with the integrated OMF engine. The previous examples all demonstrate this.

31. In addition, the WebOS 4.0 User's Guide clearly discloses "generating a computer application on a host system" as follows.

32. At pages 4 and 5, the WebOS User's Guide discloses that the WebOS engine is a method of generating a computer application. Specifically, the WebOS User's Guide states that WebOS "enables Web developers to easily and efficiently **produce** fully interactive Web sites" and "delivers a comprehensive development platform for controlled-access and controlled-display applications using the World Wide Web."



WebOS™ 4.0 Introduction

WebOS™ is a unique software solution that provides a powerful and flexible platform for a wide variety of applications using the World Wide Web. It enables Web developers to easily and efficiently produce fully interactive Web sites that integrate multiple media types in a logical and controllable fashion.

WebOS™ provides a Web Object-Management Facility that enables the developer to create dynamic data and logic objects that can be used and re-used throughout a Web site. This means that WebOS™ delivers a comprehensive development platform for controlled-access and controlled-display applications using the World Wide Web.

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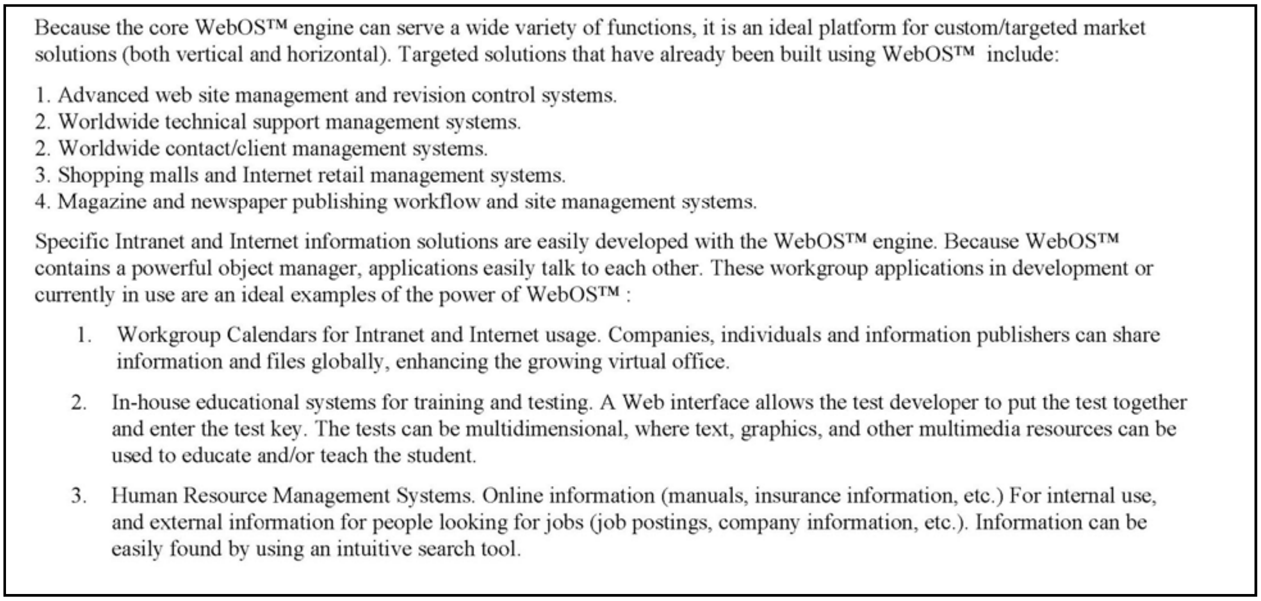
33. The WebOS User's Guide goes on to state on Page 5 that Targeted Solutions such as web site management and revision control systems, technical support management systems, contact/client management systems, shopping malls and Internet retail management systems, and magazines and newspaper publishing workflows and site management systems have already been built using WebOS.



Because the core WebOS™ engine can serve a wide variety of functions, it is an ideal platform for custom/targeted market solutions (both vertical and horizontal). Targeted solutions that have already been built using WebOS™ include:

1. Advanced web site management and revision control systems.
2. Worldwide technical support management systems.
2. Worldwide contact/client management systems.
3. Shopping malls and Internet retail management systems.
4. Magazine and newspaper publishing workflow and site management systems.

Specific Intranet and Internet information solutions are easily developed with the WebOS™ engine. Because WebOS™ contains a powerful object manager, applications easily talk to each other. These workgroup applications in development or currently in use are an ideal examples of the power of WebOS™ :

1. Workgroup Calendars for Intranet and Internet usage. Companies, individuals and information publishers can share information and files globally, enhancing the growing virtual office.
2. In-house educational systems for training and testing. A Web interface allows the test developer to put the test together and enter the test key. The tests can be multidimensional, where text, graphics, and other multimedia resources can be used to educate and/or teach the student.
3. Human Resource Management Systems. Online information (manuals, insurance information, etc.) For internal use, and external information for people looking for jobs (job postings, company information, etc.). Information can be easily found by using an intuitive search tool.

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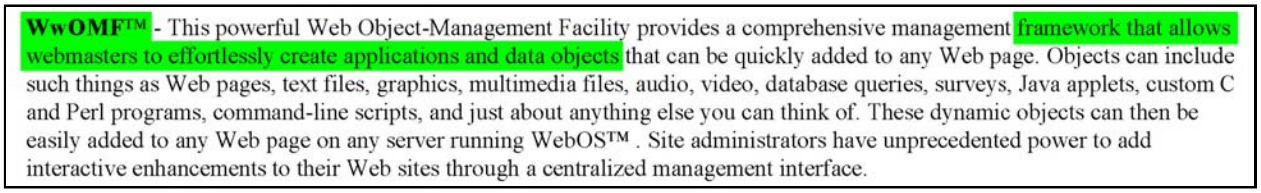
34. As also shown in the excerpt above, specific Intranet and Internet information solutions are easily developed with the WebOS engine.

35. This use of the term WebOS engine is important here. In fact the engine of WebOS is the WwOMF/OMF or Web Object Management Facility/Framework. Using OMF, WebOS "allows webmasters to effortlessly create applications."



WwOMF™ - This powerful Web Object-Management Facility provides a comprehensive management framework that allows webmasters to effortlessly create applications and data objects that can be quickly added to any Web page. Objects can include such things as Web pages, text files, graphics, multimedia files, audio, video, database queries, surveys, Java applets, custom C and Perl programs, command-line scripts, and just about anything else you can think of. These dynamic objects can then be easily added to any Web page on any server running WebOS™ . Site administrators have unprecedented power to add interactive enhancements to their Web sites through a centralized management interface.

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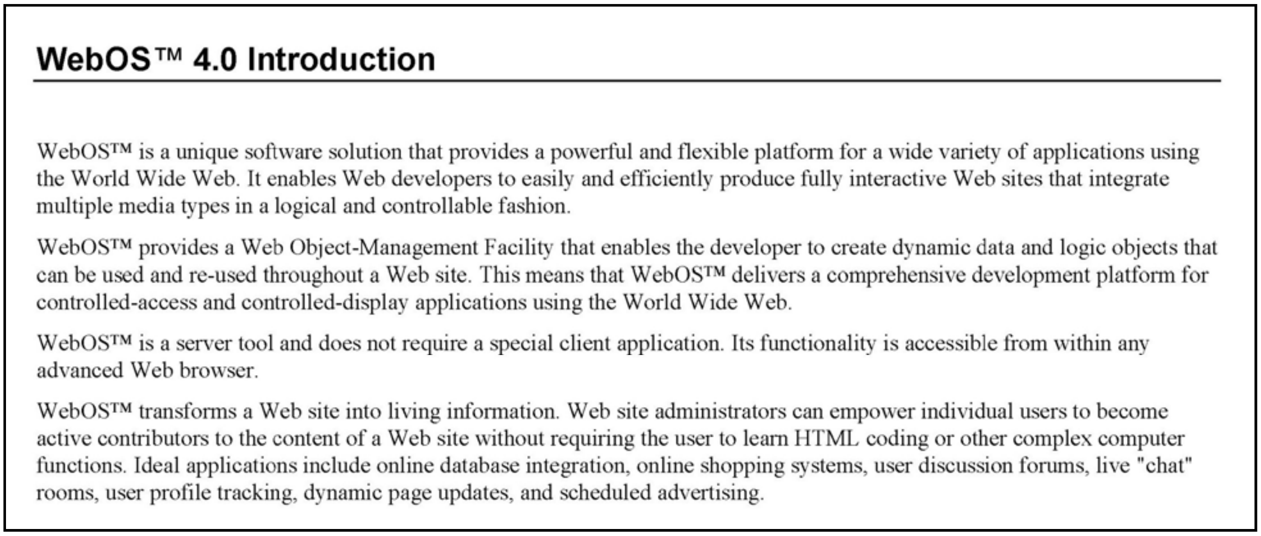
36. One of ordinary skill in the art, reading these excerpts from the WebOS User's Guide would understand that the terms ”produce” “built”, “developed,” and “create” are synonymous with “generate” and that “development platform” also suggests the ability to generate as contemplated by the ‘asserted patents. Furthermore anyone of ordinary skill in the art would understand that “application,” “Web site,” “solution,” or “system” are synonymous with “computer application.”

37. Also pages 4 and 5 of the WebOS User's Guide disclose that WebOS runs “on a host system.” On page 4, WebOS is described as a “powerful and flexible platform for a wide variety of applications” and is <u>expressly called</u> a “server tool” with its functionality “accessible from within any advanced Web browser.”



WebOS™ 4.0 Introduction

WebOS™ is a unique software solution that provides a powerful and flexible platform for a wide variety of applications using the World Wide Web. It enables Web developers to easily and efficiently produce fully interactive Web sites that integrate multiple media types in a logical and controllable fashion.

WebOS™ provides a Web Object-Management Facility that enables the developer to create dynamic data and logic objects that can be used and re-used throughout a Web site. This means that WebOS™ delivers a comprehensive development platform for controlled-access and controlled-display applications using the World Wide Web.

WebOS™ is a server tool and does not require a special client application. Its functionality is accessible from within any advanced Web browser.

WebOS™ transforms a Web site into living information. Web site administrators can empower individual users to become active contributors to the content of a Web site without requiring the user to learn HTML coding or other complex computer functions. Ideal applications include online database integration, online shopping systems, user discussion forums, live "chat" rooms, user profile tracking, dynamic page updates, and scheduled advertising.

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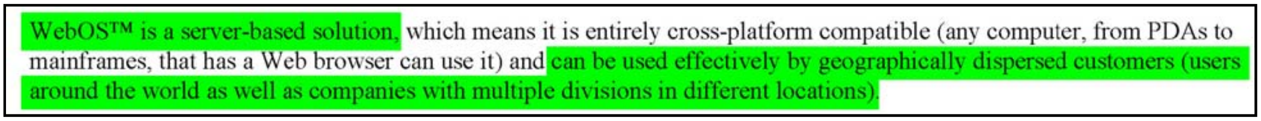
38. Later on Page 5, WebOS is again called a “server-based solution” that “can be used effectively by geographically dispersed customers.”



WebOS™ is a server-based solution, which means it is entirely cross-platform compatible (any computer, from PDAs to mainframes, that has a Web browser can use it) and can be used effectively by geographically dispersed customers (users around the world as well as companies with multiple divisions in different locations).

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39. A hosted system is generally a system (i.e. software/computer application) that is installed and run on a remote server or computer and accessed via the internet, intranet or other network. To one skilled in the art, the terms "platform," "server tool," and "server-based solution" clearly indicate/infer that the WebOS User's Guide is describing or teaching a hosted system. Thus, it is my opinion that the WebOS 4.0 User's Guide clearly discloses and teaches generating a computer application on a host system as contemplated by the asserted claims.

(Arbitrary Object Framework) "Arbitrary object framework"

40. Newsflash clearly discloses an "arbitrary object framework," as construed by the Court. The Court defined the term "arbitrary object framework" to mean "a hierarchical structure of arbitrary objects, of various object types, where the arbitrary objects are created by the user, managed in an object library, and deployed into a design framework to create a computer application or deployed into a container page to create a web site." Sept. 16, 2013 Claim Construction Order at 39. Breaking it down even further for sake of clarity, the Court's interpretation, specifically calls for the following distinct sub-limitations of an arbitrary object framework: (1) a hierarchical structure of arbitrary objects, (2) arbitrary objects of various types created by the user, (3) management of arbitrary objects in an object library, and (4) deployment of arbitrary objects into a design framework to generate a computer application or into a container page to create a website.

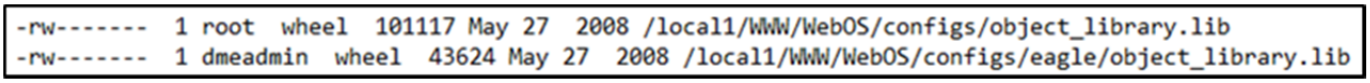
41. Newsflash discloses each of the distinct sub-limitations of the arbitrary object framework as follows:

"Hierarchical structure of arbitrary objects"

42. See below for how Newsflash discloses "arbitrary objects."

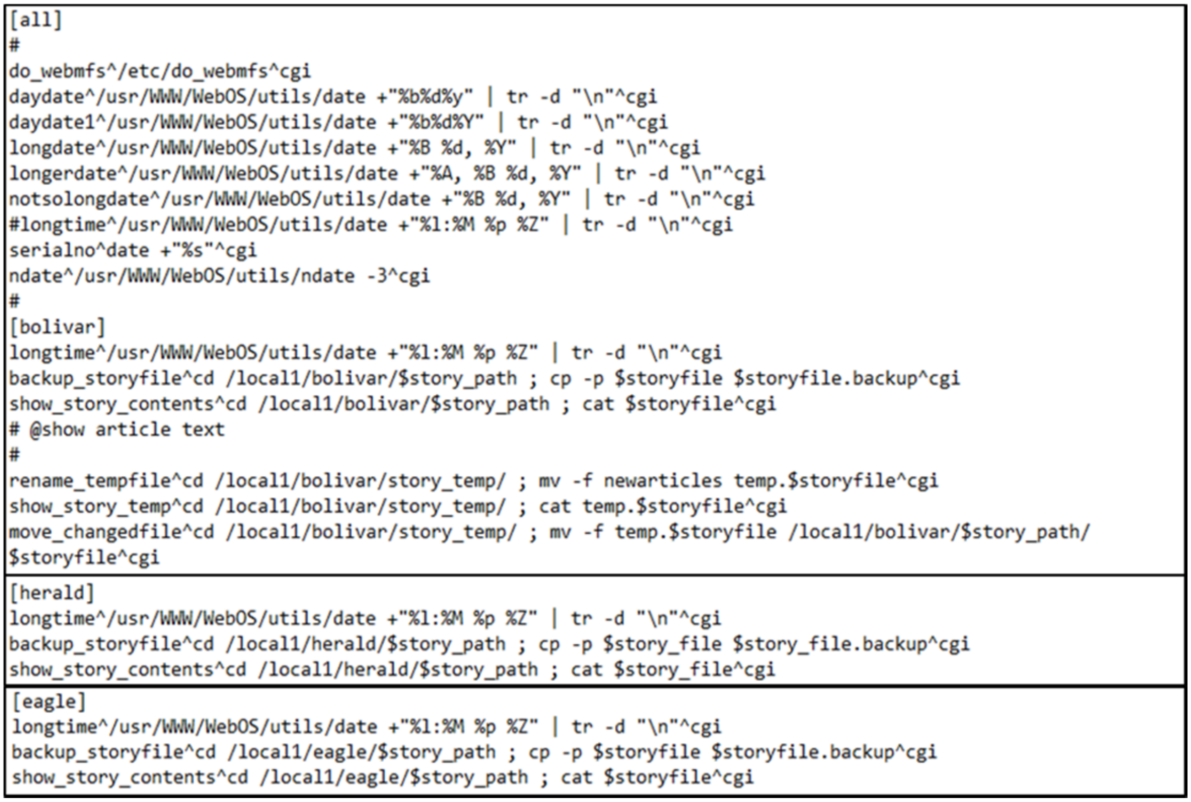
43. Newsflash was setup to simultaneously host multiple newspaper Web sites. The Walls Newsflash implementation organizes arbitrary objects into a hierarchical structure. The

Walls Newsflash implementation used two levels in its object hierarchy – the global objects that may be used by any site (i.e., all newspapers) and the objects specific to a particular newspaper (e.g., The Eagle newspaper). These are represented by the following 2 files, respectively:



```
-rw-------  1 root  wheel  101117 May 27  2008 /local1/WWW/WebOS/configs/object_library.lib
-rw-------  1 dmeadmin  wheel  43624 May 27  2008 /local1/WWW/WebOS/configs/eagle/object_library.lib
```

44. The following entries from /local1/WWW/WebOS/configs/object_library.lib demonstrate a top level of a hierarchy of objects (the “[all]” section) and several lower levels of the hierarchy for various local newspaper sites:



```
[all]
#
do_webmfs^/etc/do_webmfs^cgi
daydate^/usr/WWW/WebOS/utils/date +"%b%d%y" | tr -d "\n"^cgi
daydate1^/usr/WWW/WebOS/utils/date +"%b%d%Y" | tr -d "\n"^cgi
longdate^/usr/WWW/WebOS/utils/date +"%B %d, %Y" | tr -d "\n"^cgi
longerdate^/usr/WWW/WebOS/utils/date +"%A, %B %d, %Y" | tr -d "\n"^cgi
notsolongdate^/usr/WWW/WebOS/utils/date +"%B %d, %Y" | tr -d "\n"^cgi
#longtime^/usr/WWW/WebOS/utils/date +"%l:%M %p %Z" | tr -d "\n"^cgi
serialno^date +"%s"^cgi
ndate^/usr/WWW/WebOS/utils/ndate -3^cgi
#
[bolivar]
longtime^/usr/WWW/WebOS/utils/date +"%l:%M %p %Z" | tr -d "\n"^cgi
backup_storyfile^cd /local1/bolivar/$story_path ; cp -p $storyfile $storyfile.backup^cgi
show_story_contents^cd /local1/bolivar/$story_path ; cat $storyfile^cgi
# @show article text
#
rename_tempfile^cd /local1/bolivar/story_temp/ ; mv -f newarticles temp.$storyfile^cgi
show_story_temp^cd /local1/bolivar/story_temp/ ; cat temp.$storyfile^cgi
move_changedfile^cd /local1/bolivar/story_temp/ ; mv -f temp.$storyfile /local1/bolivar/$story_path/
$storyfile^cgi
```

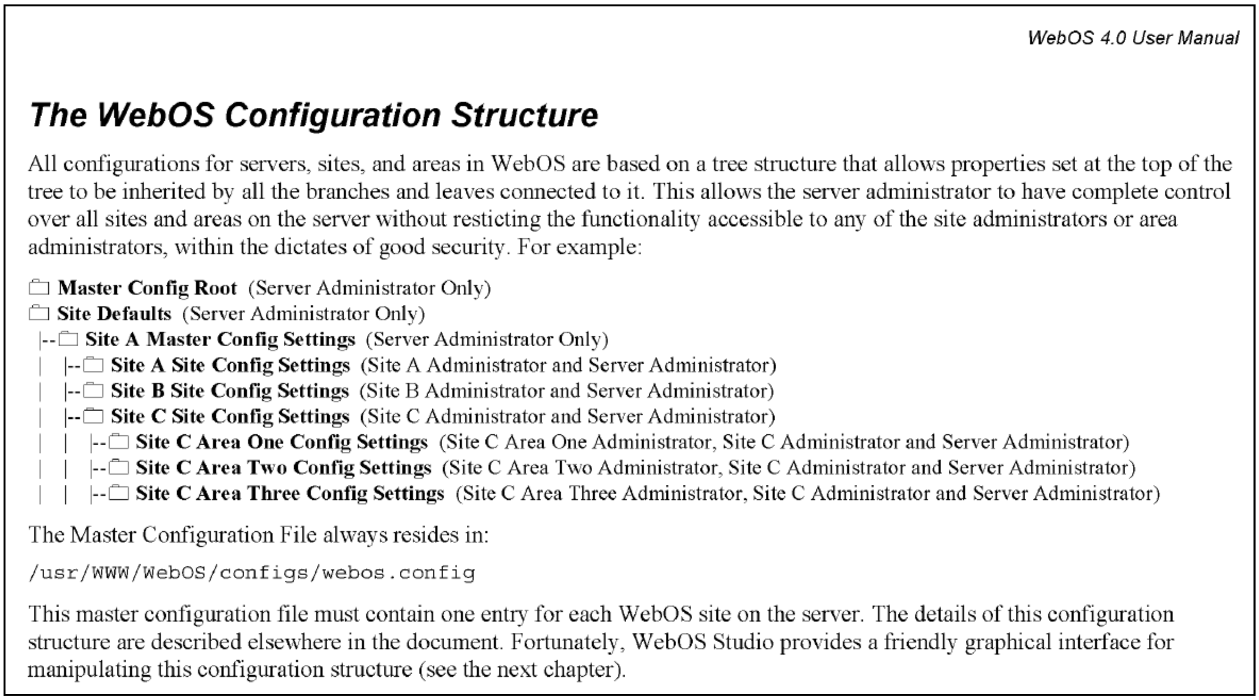
```
[herald]
longtime^/usr/WWW/WebOS/utils/date +"%l:%M %p %Z" | tr -d "\n"^cgi
backup_storyfile^cd /local1/herald/$story_path ; cp -p $story_file $story_file.backup^cgi
show_story_contents^cd /local1/herald/$story_path ; cat $story_file^cgi
```

```
[eagle]
longtime^/usr/WWW/WebOS/utils/date +"%l:%M %p %Z" | tr -d "\n"^cgi
backup_storyfile^cd /local1/eagle/$story_path ; cp -p $storyfile $storyfile.backup^cgi
show_story_contents^cd /local1/eagle/$story_path ; cat $storyfile^cgi
```

45. To one of ordinary skill in the art, these files in the Walls Newsflash implementation show a hierarchical structure of arbitrary objects by clear and convincing evidence.

46. In addition, the WebOS 4.0 User’s Guide also discloses the hierarchical structure of arbitrary objects limitation as follows. Page 9 of the WebOS User’s Guide states that “[a]ll configurations for servers, sites, and areas in WebOS are based on a tree structure that allows

properties set at the top of the tree to be inherited by all the branches and leaves connected to it." SAMSUNG_VERT00060286.



WebOS 4.0 User Manual

The WebOS Configuration Structure

All configurations for servers, sites, and areas in WebOS are based on a tree structure that allows properties set at the top of the tree to be inherited by all the branches and leaves connected to it. This allows the server administrator to have complete control over all sites and areas on the server without resticting the functionality accessible to any of the site administrators or area administrators, within the dictates of good security. For example:

```
□ Master Config Root  (Server Administrator Only)
□ Site Defaults  (Server Administrator Only)
 |--□ Site A Master Config Settings  (Server Administrator Only)
 |    |--□ Site A Site Config Settings  (Site A Administrator and Server Administrator)
 |    |--□ Site B Site Config Settings  (Site B Administrator and Server Administrator)
 |    |--□ Site C Site Config Settings  (Site C Administrator and Server Administrator)
 |    |    |--□ Site C Area One Config Settings  (Site C Area One Administrator, Site C Administrator and Server Administrator)
 |    |    |--□ Site C Area Two Config Settings  (Site C Area Two Administrator, Site C Administrator and Server Administrator)
 |    |    |--□ Site C Area Three Config Settings  (Site C Area Three Administrator, Site C Administrator and Server Administrator)
```

The Master Configuration File always resides in:

```
/usr/WWW/WebOS/configs/webos.config
```

This master configuration file must contain one entry for each WebOS site on the server. The details of this configuration structure are described elsewhere in the document. Fortunately, WebOS Studio provides a friendly graphical interface for manipulating this configuration structure (see the next chapter).

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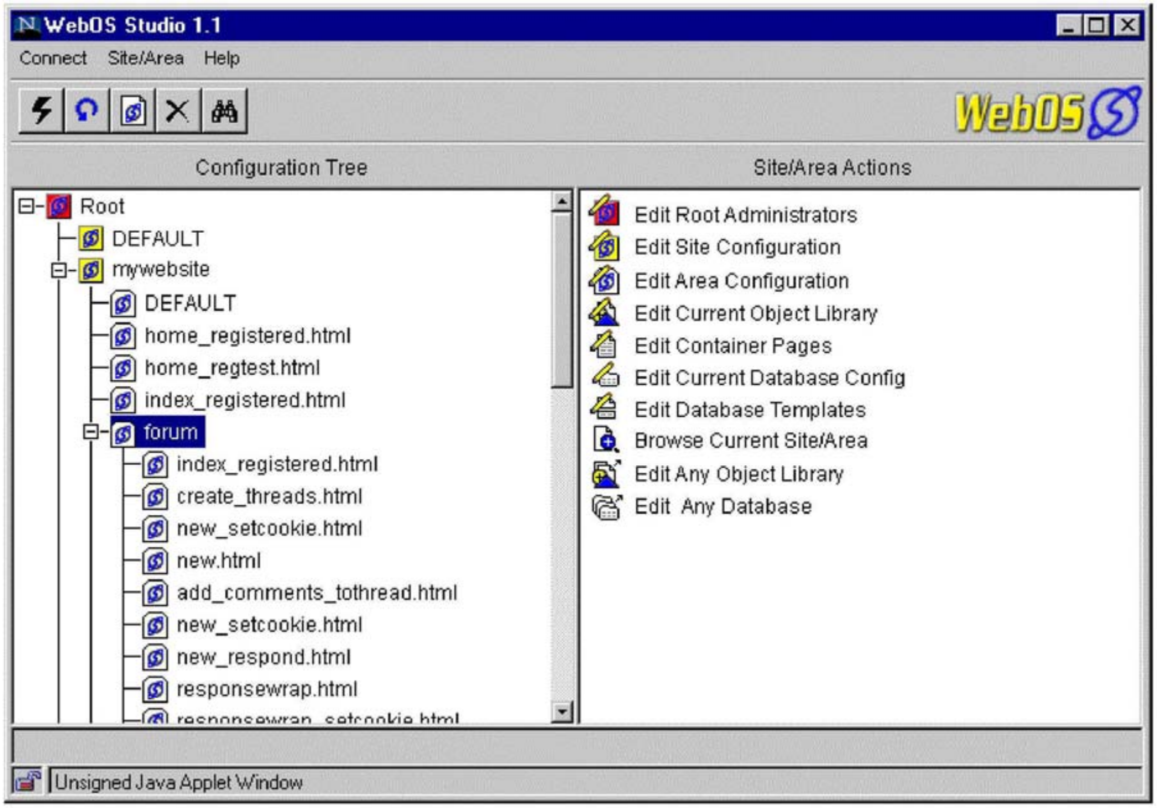
47. In the pages that follow, the WebOS User's Guide provides numerous examples and detailed descriptions and mapping of WebOS's hierarchical structure in sections relating to WebOS Configuration Control/WebOS Studio,



Perhaps the two most important elements of this configuration structure are the **Site Name** and **Area Name**. The Site Name and any Area Names within a given site are used in referencing site-specific and area-specific information such as the location of the Object Library for that site and/or area. Site Name is also required as a part of all DBNAME references for access to any database on the server. It is the main indicator required to access any configurations for the entire site. Configuration directives issued in the DEFAULT section of the Master Configuration File, indicated by the yellow icon

provides default settings for every site on the server. A separate chapter on WebOS Studio provides more detail about how it can be used to manage the WebOS configuration structure. The rest of this chapter deals with individual configuration directives and what they mean.

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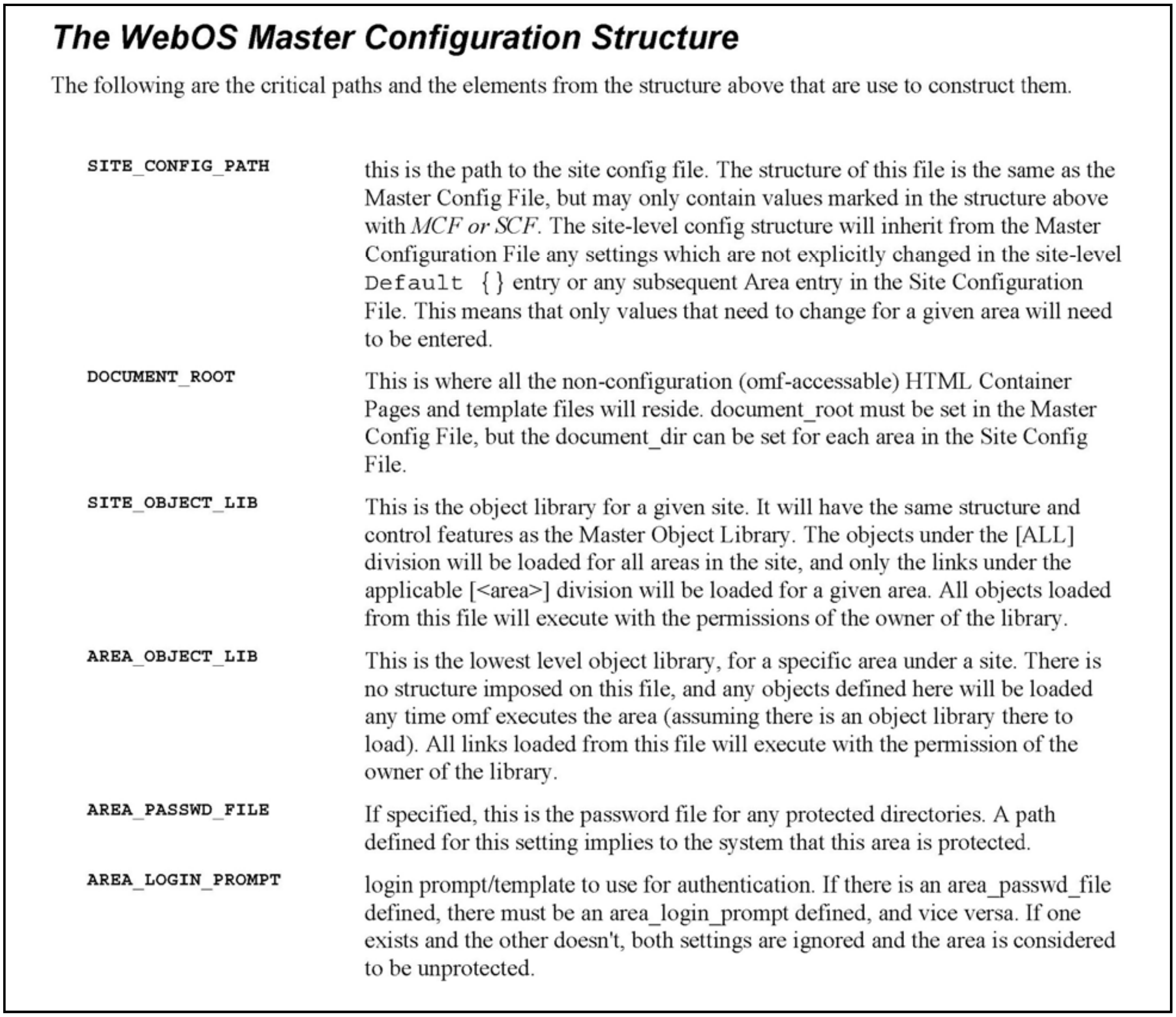
48. The WebOS Master Configuration Structure:



The WebOS Master Configuration Structure

The following are the critical paths and the elements from the structure above that are use to construct them.

SITE_CONFIG_PATH this is the path to the site config file. The structure of this file is the same as the Master Config File, but may only contain values marked in the structure above with *MCF or SCF*. The site-level config structure will inherit from the Master Configuration File any settings which are not explicitly changed in the site-level `Default {}` entry or any subsequent Area entry in the Site Configuration File. This means that only values that need to change for a given area will need to be entered.

DOCUMENT_ROOT This is where all the non-configuration (omf-accessable) HTML Container Pages and template files will reside. document_root must be set in the Master Config File, but the document_dir can be set for each area in the Site Config File.

SITE_OBJECT_LIB This is the object library for a given site. It will have the same structure and control features as the Master Object Library. The objects under the [ALL] division will be loaded for all areas in the site, and only the links under the applicable [<area>] division will be loaded for a given area. All objects loaded from this file will execute with the permissions of the owner of the library.

AREA_OBJECT_LIB This is the lowest level object library, for a specific area under a site. There is no structure imposed on this file, and any objects defined here will be loaded any time omf executes the area (assuming there is an object library there to load). All links loaded from this file will execute with the permission of the owner of the library.

AREA_PASSWD_FILE If specified, this is the password file for any protected directories. A path defined for this setting implies to the system that this area is protected.

AREA_LOGIN_PROMPT login prompt/template to use for authentication. If there is an area_passwd_file defined, there must be an area_login_prompt defined, and vice versa. If one exists and the other doesn't, both settings are ignored and the area is considered to be unprotected.

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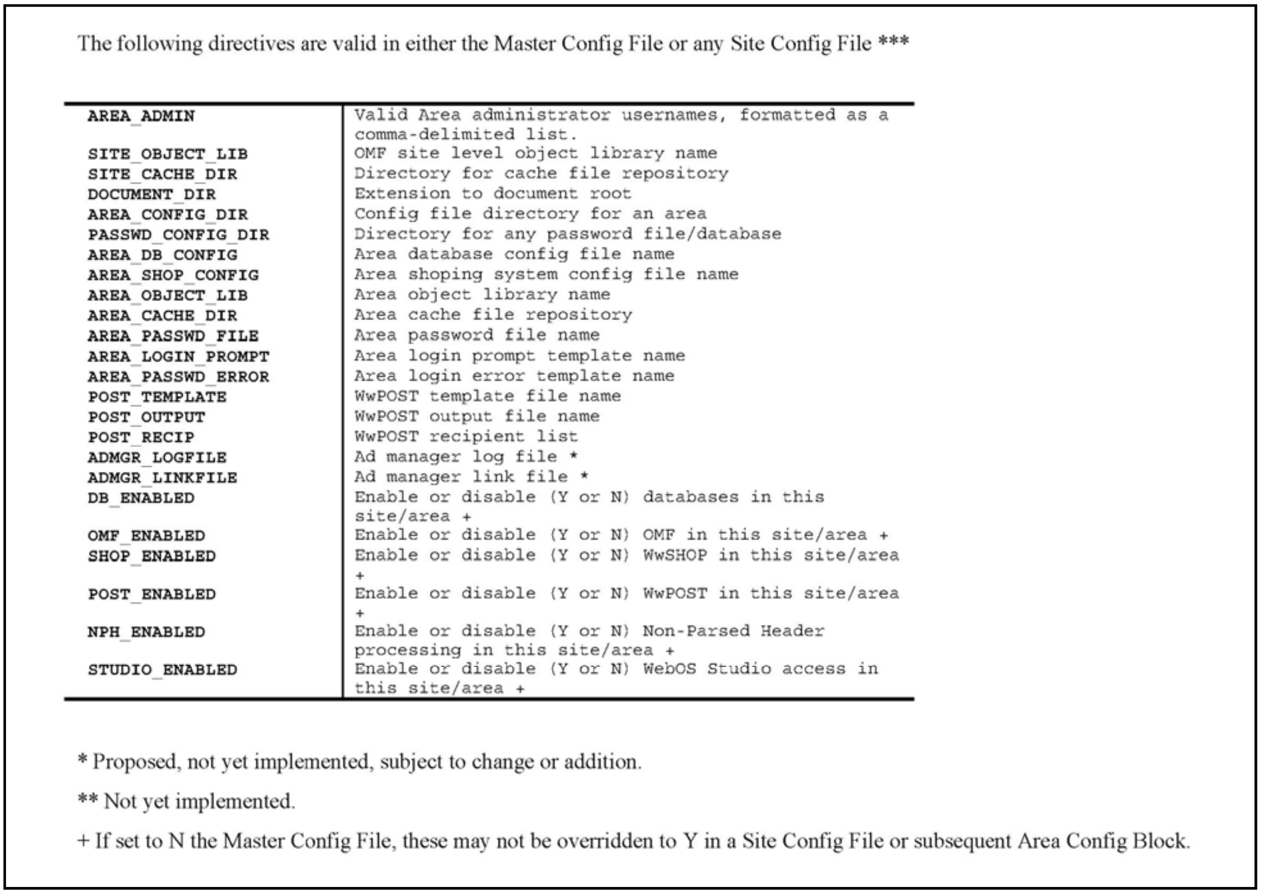
49. The WebOS Configuration Settings,



The following directives are valid in either the Master Config File or any Site Config File ***

AREA_ADMIN	Valid Area administrator usernames, formatted as a comma-delimited list.
SITE_OBJECT_LIB	OMF site level object library name
SITE_CACHE_DIR	Directory for cache file repository
DOCUMENT_DIR	Extension to document root
AREA_CONFIG_DIR	Config file directory for an area
PASSWD_CONFIG_DIR	Directory for any password file/database
AREA_DB_CONFIG	Area database config file name
AREA_SHOP_CONFIG	Area shoping system config file name
AREA_OBJECT_LIB	Area object library name
AREA_CACHE_DIR	Area cache file repository
AREA_PASSWD_FILE	Area password file name
AREA_LOGIN_PROMPT	Area login prompt template name
AREA_PASSWD_ERROR	Area login error template name
POST_TEMPLATE	WwPOST template file name
POST_OUTPUT	WwPOST output file name
POST_RECIP	WwPOST recipient list
ADMGR_LOGFILE	Ad manager log file *
ADMGR_LINKFILE	Ad manager link file *
DB_ENABLED	Enable or disable (Y or N) databases in this site/area +
OMF_ENABLED	Enable or disable (Y or N) OMF in this site/area +
SHOP_ENABLED	Enable or disable (Y or N) WwSHOP in this site/area +
POST_ENABLED	Enable or disable (Y or N) WwPOST in this site/area +
NPH_ENABLED	Enable or disable (Y or N) Non-Parsed Header processing in this site/area +
STUDIO_ENABLED	Enable or disable (Y or N) WebOS Studio access in this site/area +

* Proposed, not yet implemented, subject to change or addition.

** Not yet implemented.

+ If set to N the Master Config File, these may not be overridden to Y in a Site Config File or subsequent Area Config Block.

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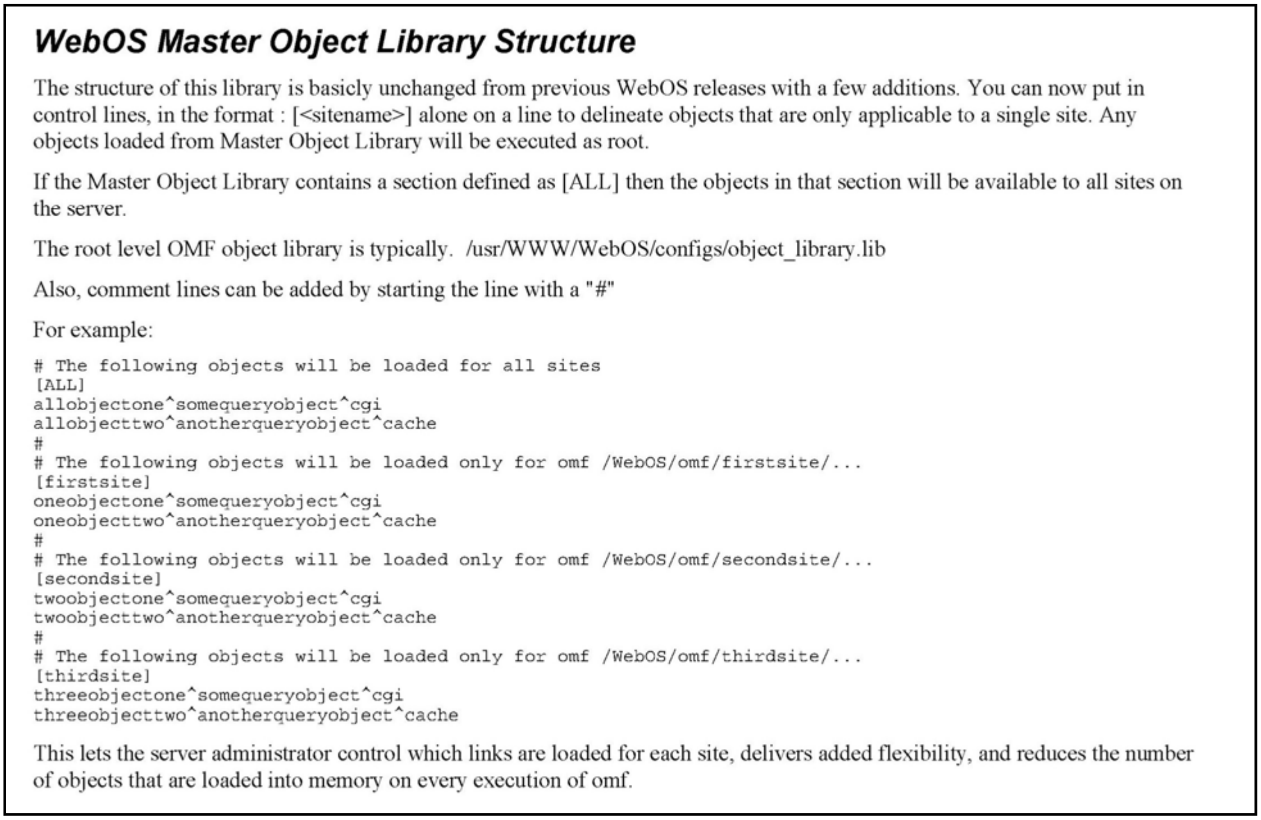
50. And the WebOS Master Object Library Structure.



WebOS Master Object Library Structure

The structure of this library is basicly unchanged from previous WebOS releases with a few additions. You can now put in control lines, in the format : [<sitename>] alone on a line to delineate objects that are only applicable to a single site. Any objects loaded from Master Object Library will be executed as root.

If the Master Object Library contains a section defined as [ALL] then the objects in that section will be available to all sites on the server.

The root level OMF object library is typically. /usr/WWW/WebOS/configs/object_library.lib

Also, comment lines can be added by starting the line with a "#"

For example:

```
# The following objects will be loaded for all sites
[ALL]
allobjectone^somequeryobject^cgi
allobjecttwo^anotherqueryobject^cache
#
# The following objects will be loaded only for omf /WebOS/omf/firstsite/...
[firstsite]
oneobjectone^somequeryobject^cgi
oneobjecttwo^anotherqueryobject^cache
#
# The following objects will be loaded only for omf /WebOS/omf/secondsite/...
[secondsite]
twoobjectone^somequeryobject^cgi
twoobjecttwo^anotherqueryobject^cache
#
# The following objects will be loaded only for omf /WebOS/omf/thirdsite/...
[thirdsite]
threeobjectone^somequeryobject^cgi
threeobjecttwo^anotherqueryobject^cache
```

This lets the server administrator control which links are loaded for each site, delivers added flexibility, and reduces the number of objects that are loaded into memory on every execution of omf.

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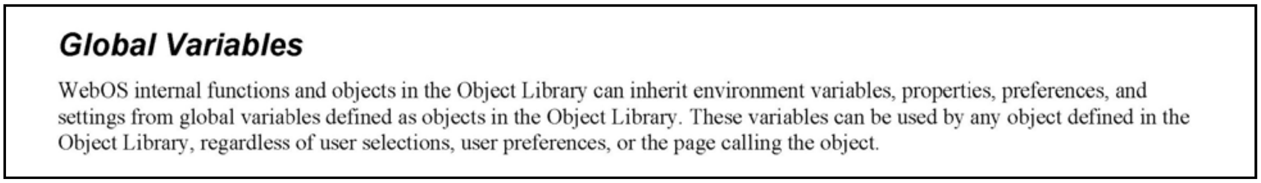
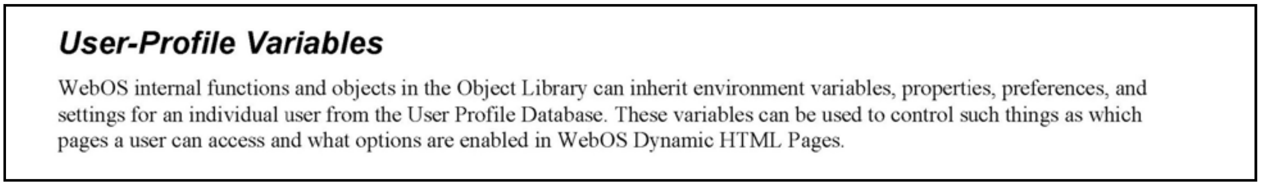
51. Additional support for the use of a hierarchical structure for arbitrary objects is provided in the following sections of the WebOS User's Guide:



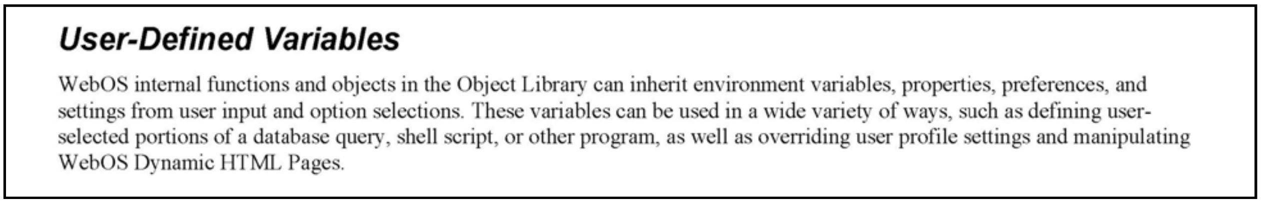
Global Variables

WebOS internal functions and objects in the Object Library can inherit environment variables, properties, preferences, and settings from global variables defined as objects in the Object Library. These variables can be used by any object defined in the Object Library, regardless of user selections, user preferences, or the page calling the object.



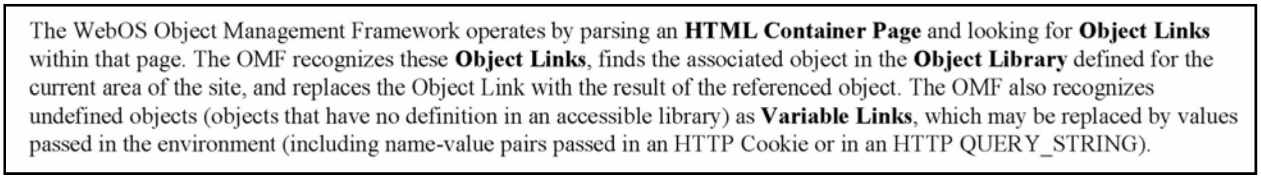
User-Profile Variables

WebOS internal functions and objects in the Object Library can inherit environment variables, properties, preferences, and settings for an individual user from the User Profile Database. These variables can be used to control such things as which pages a user can access and what options are enabled in WebOS Dynamic HTML Pages.



User-Defined Variables

WebOS internal functions and objects in the Object Library can inherit environment variables, properties, preferences, and settings from user input and option selections. These variables can be used in a wide variety of ways, such as defining user-selected portions of a database query, shell script, or other program, as well as overriding user profile settings and manipulating WebOS Dynamic HTML Pages.



The WebOS Object Management Framework operates by parsing an **HTML Container Page** and looking for **Object Links** within that page. The OMF recognizes these **Object Links**, finds the associated object in the **Object Library** defined for the current area of the site, and replaces the Object Link with the result of the referenced object. The OMF also recognizes undefined objects (objects that have no definition in an accessible library) as **Variable Links**, which may be replaced by values passed in the environment (including name-value pairs passed in an HTTP Cookie or in an HTTP QUERY_STRING).

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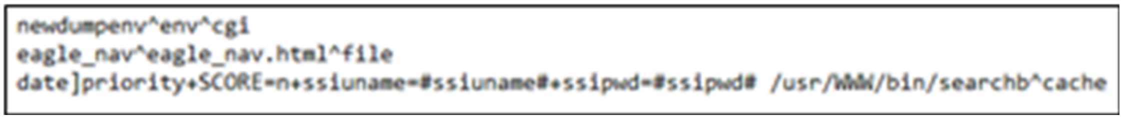
"Of various object types, where the arbitrary objects are created by the user"

52. See below for how Newsflash discloses "arbitrary objects."

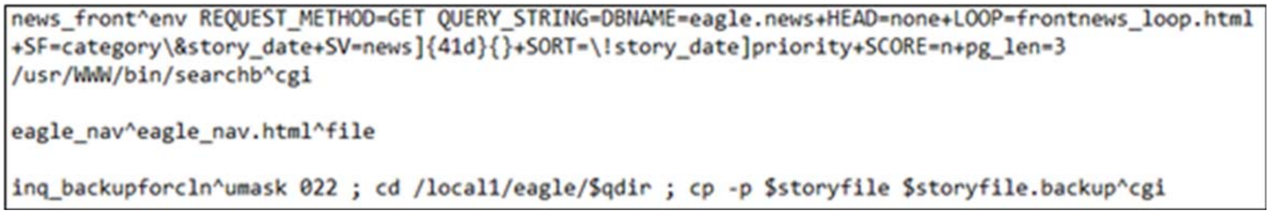
53. The Walls Newsflash implementation discloses arbitrary objects of various types. The following lines are excerpted from the /local1/WWW/WebOS/configs/eagle/object_library.lib library file of the Walls Newsflash:



```
newdumpenv^env^cgi
eagle_nav^eagle_nav.html^file
date]priority+SCORE=n+ssiuname=#ssiuname#+ssipwd=#ssipwd# /usr/WWW/bin/searchb^cache
```

54. Each object had three fields in its declaration: the object name, the body, and the type. These three objects were each of a different type: CGI, file, and cache respectively. Each of the different types of objects behaved differently. The first object, newdumpenv, has type "CGI." This means that the body, in this case "env" is invoked by the operating system, and the results of that invocation are printed into the container page. The second object, eagle_nav, has the "file" type. In this case, the contents of the eagle_nav.html file are inserted directly into the container page. The final object, date]priority, is "cache" type. This is evaluated only if there's not a cached output of this object. If there's a recent cached output of the object, the cached output will be used in the container page. Otherwise, the object will be run and the results inserted into the container page. Subsequently, the results also cached for future calls.

55. The following three Walls Newsflash objects located in /local1/WWW/WebOS/configs/object_library.lib are examples of content, form, and function objects respectively:



```
news_front^env REQUEST_METHOD=GET QUERY_STRING=DBNAME=eagle.news+HEAD=none+LOOP=frontnews_loop.html
+SF=category\&story_date+SV=news]{41d}{}+SORT=\!story_date]priority+SCORE=n+pg_len=3
/usr/WWW/bin/searchb^cgi

eagle_nav^eagle_nav.html^file

inq_backupforcln^umask 022 ; cd /local1/eagle/$qdir ; cp -p $storyfile $storyfile.backup^cgi
```

56. The Walls Newsflash teaches objects that are created by the user. New objects are created by a user by directly inserting the object definition lines as described above. Standard visual text editors (e.g. vi or emacs) can be used as well as the WebOS Studio application for performing this creation step.

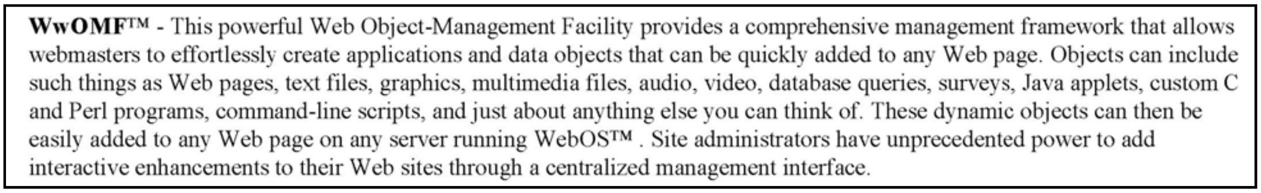
57. There are 10 object library files contained on disk for The Eagle:

```
/local1/WWW/WebOS/configs/eagle/object_library.lib

/local1/WWW/WebOS/configs/eagle/alternate_object_library.lib

/local1/WWW/WebOS/configs/eagle/eagle_db/forum/forum_object_library.lib

/local1/WWW/WebOS/configs/eagle/object_library.lib.work

/local1/WWW/WebOS/configs/eagle/object_library.lib.good

/local1/WWW/WebOS/configs/eagle/object_library_ramdisktemp.lib

/local1/WWW/WebOS/configs/object_library.lib

/local1/WWW/WebOS/configs/object_library.lib.bak

/local1/WWW/WebOS/configs/object_library.lib.old

/local1/WWW/WebOS/configs/object_library.lib.work
```

58. All the objects in these libraries were created by the user and are compatible/operational with the Object Management Framework (OMF) engine that was in use at Walls Newsflash in August 1998.

59. A person of ordinary skill in the art would view the foregoing excerpts for the Walls Newsflash as demonstrating that arbitrary objects of various types were created by the user, and it is my opinion that this limitation of claim 56 of the ‘744 is clearly disclosed by the Walls Newsflash.

60. In addition, on Page 4 of the WebOS User's Guide, the WwOMF is described as allowing "Webmasters to effortlessly create applications and data objects that can be quickly added to any Web page. Objects can include such things as Web pages, text files, graphics, multimedia files, audio, video, database queries, surveys, Java applets, custom C and Perl programs, command line scripts, and just about anything else you can think of.



WwOMF™ - This powerful Web Object-Management Facility provides a comprehensive management framework that allows webmasters to effortlessly create applications and data objects that can be quickly added to any Web page. Objects can include such things as Web pages, text files, graphics, multimedia files, audio, video, database queries, surveys, Java applets, custom C and Perl programs, command-line scripts, and just about anything else you can think of. These dynamic objects can then be easily added to any Web page on any server running WebOS™ . Site administrators have unprecedented power to add interactive enhancements to their Web sites through a centralized management interface.

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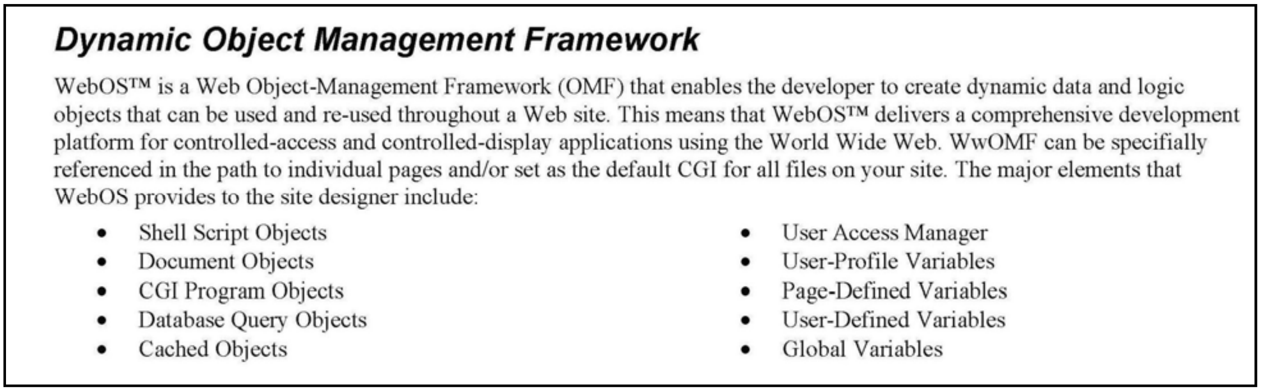
61. Also page 7 of the WebOS User's Guide provides that WebOS and OMF enable "the developer to create dynamic data and logic objects that can be used and reused throughout a Web site."



Dynamic Object Management Framework

WebOS™ is a Web Object-Management Framework (OMF) that enables the developer to create dynamic data and logic objects that can be used and re-used throughout a Web site. This means that WebOS™ delivers a comprehensive development platform for controlled-access and controlled-display applications using the World Wide Web. WwOMF can be specifially referenced in the path to individual pages and/or set as the default CGI for all files on your site. The major elements that WebOS provides to the site designer include:

- Shell Script Objects
- Document Objects
- CGI Program Objects
- Database Query Objects
- Cached Objects
- User Access Manager
- User-Profile Variables
- Page-Defined Variables
- User-Defined Variables
- Global Variables

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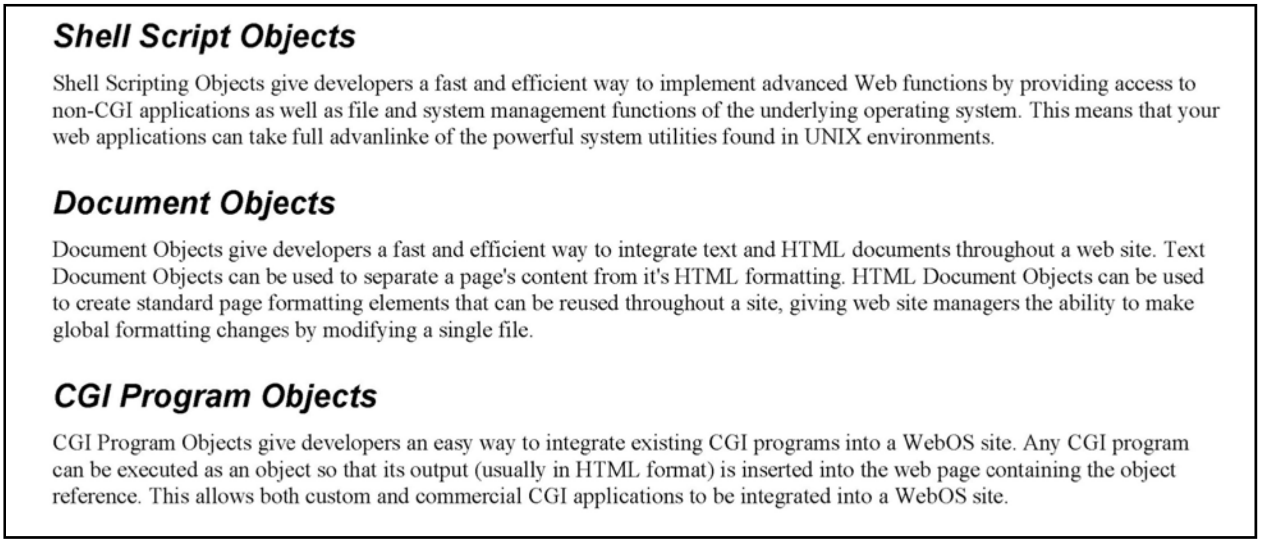
62. Furthermore, page 8 of the WebOS User's Guide describes how developers can implement and integrate Shell Script Objects, Document Objects, and CGI Program Objects using WebOS.



Shell Script Objects

Shell Scripting Objects give developers a fast and efficient way to implement advanced Web functions by providing access to non-CGI applications as well as file and system management functions of the underlying operating system. This means that your web applications can take full advanlinke of the powerful system utilities found in UNIX environments.

Document Objects

Document Objects give developers a fast and efficient way to integrate text and HTML documents throughout a web site. Text Document Objects can be used to separate a page's content from it's HTML formatting. HTML Document Objects can be used to create standard page formatting elements that can be reused throughout a site, giving web site managers the ability to make global formatting changes by modifying a single file.

CGI Program Objects

CGI Program Objects give developers an easy way to integrate existing CGI programs into a WebOS site. Any CGI program can be executed as an object so that its output (usually in HTML format) is inserted into the web page containing the object reference. This allows both custom and commercial CGI applications to be integrated into a WebOS site.

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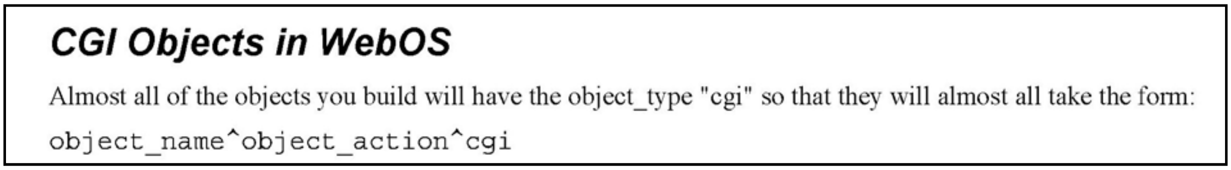
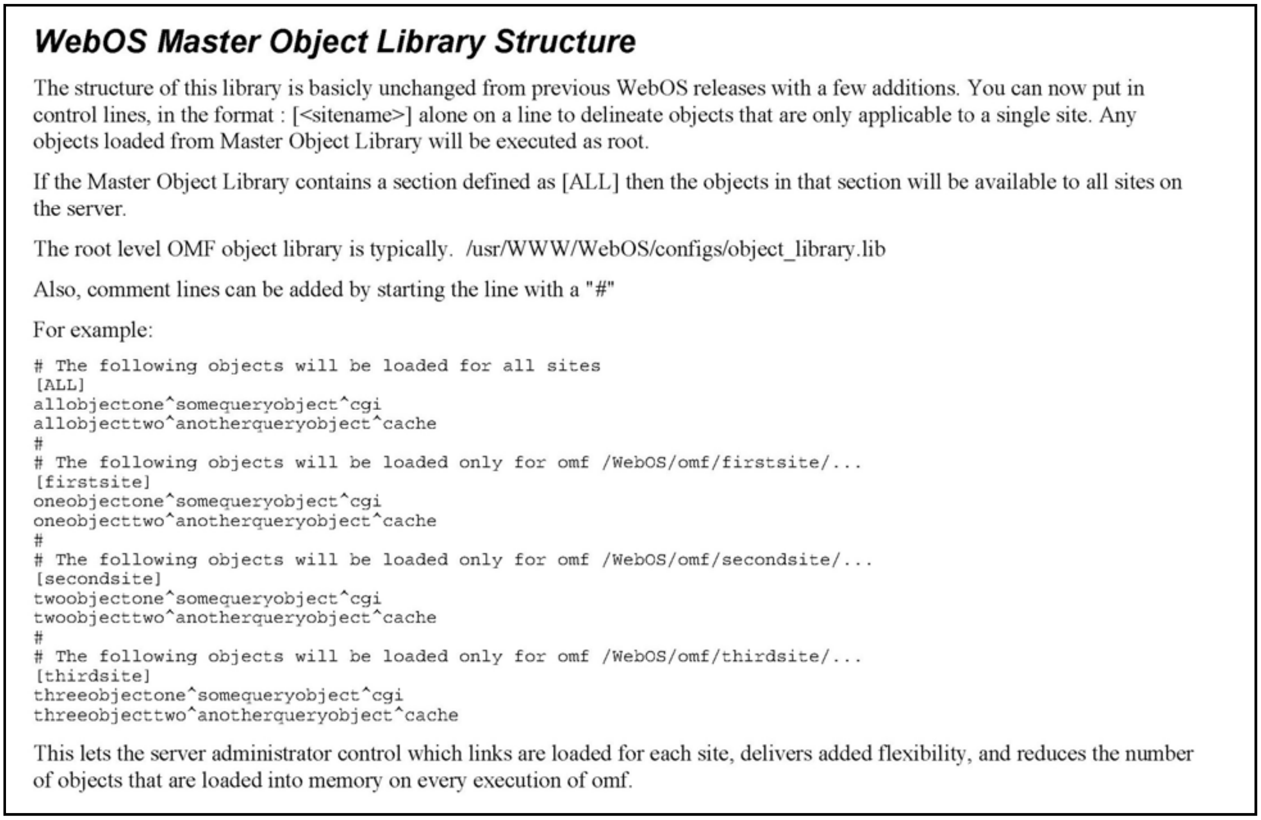
63. Finally, in several places the WebOS User’s Guide clearly discloses that “you” [i.e., the user to whom the Guide is directed] “build” [i.e., create] objects:



CGI Objects in WebOS

Almost all of the objects you build will have the object_type "cgi" so that they will almost all take the form:

```
object_name^object_action^cgi
```



WebOS Master Object Library Structure

The structure of this library is basicly unchanged from previous WebOS releases with a few additions. You can now put in control lines, in the format : [<sitename>] alone on a line to delineate objects that are only applicable to a single site. Any objects loaded from Master Object Library will be executed as root.

If the Master Object Library contains a section defined as [ALL] then the objects in that section will be available to all sites on the server.

The root level OMF object library is typically. /usr/WWW/WebOS/configs/object_library.lib

Also, comment lines can be added by starting the line with a "#"

For example:

```
# The following objects will be loaded for all sites
[ALL]
allobjectone^somequeryobject^cgi
allobjecttwo^anotherqueryobject^cache
#
# The following objects will be loaded only for omf /WebOS/omf/firstsite/...
[firstsite]
oneobjectone^somequeryobject^cgi
oneobjecttwo^anotherqueryobject^cache
#
# The following objects will be loaded only for omf /WebOS/omf/secondsite/...
[secondsite]
twoobjectone^somequeryobject^cgi
twoobjecttwo^anotherqueryobject^cache
#
# The following objects will be loaded only for omf /WebOS/omf/thirdsite/...
[thirdsite]
threeobjectone^somequeryobject^cgi
threeobjecttwo^anotherqueryobject^cache
```

This lets the server administrator control which links are loaded for each site, delivers added flexibility, and reduces the number of objects that are loaded into memory on every execution of omf.

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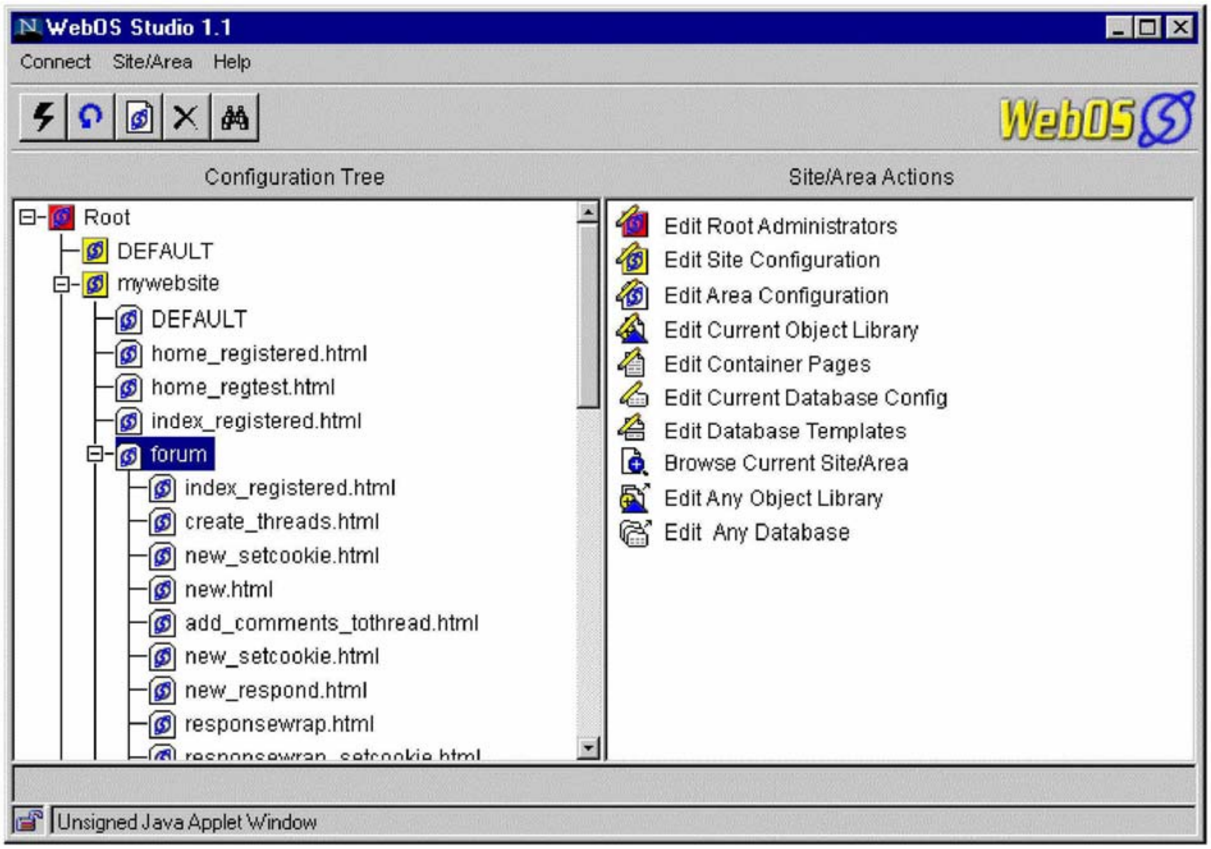
64. And "You" "put in control lines". It then explains in detail how you do so in the examples provided at the bottom of the page at SAMSUNG_VERT00060292.

65. It even provides a screen shot of the user interface reflecting where the user can undertake these activities:



SAMSUNG_VERT00060287.

66. A person of ordinary skill in the art would view the foregoing excerpts for the WebOS User's Guide as clearly demonstrating that arbitrary objects of various types were created by the user in the WebOS 4.0 User's Guide.

"Managed in an object library"

67. Newsflash clearly discloses management in an object library for reasons described below in the section addressing the "managing said arbitrary objects in an object library" limitation of claim 56 of the '744 patent.

"Deployed into a design framework to create a computer application or deployed into a container page to create a web site"

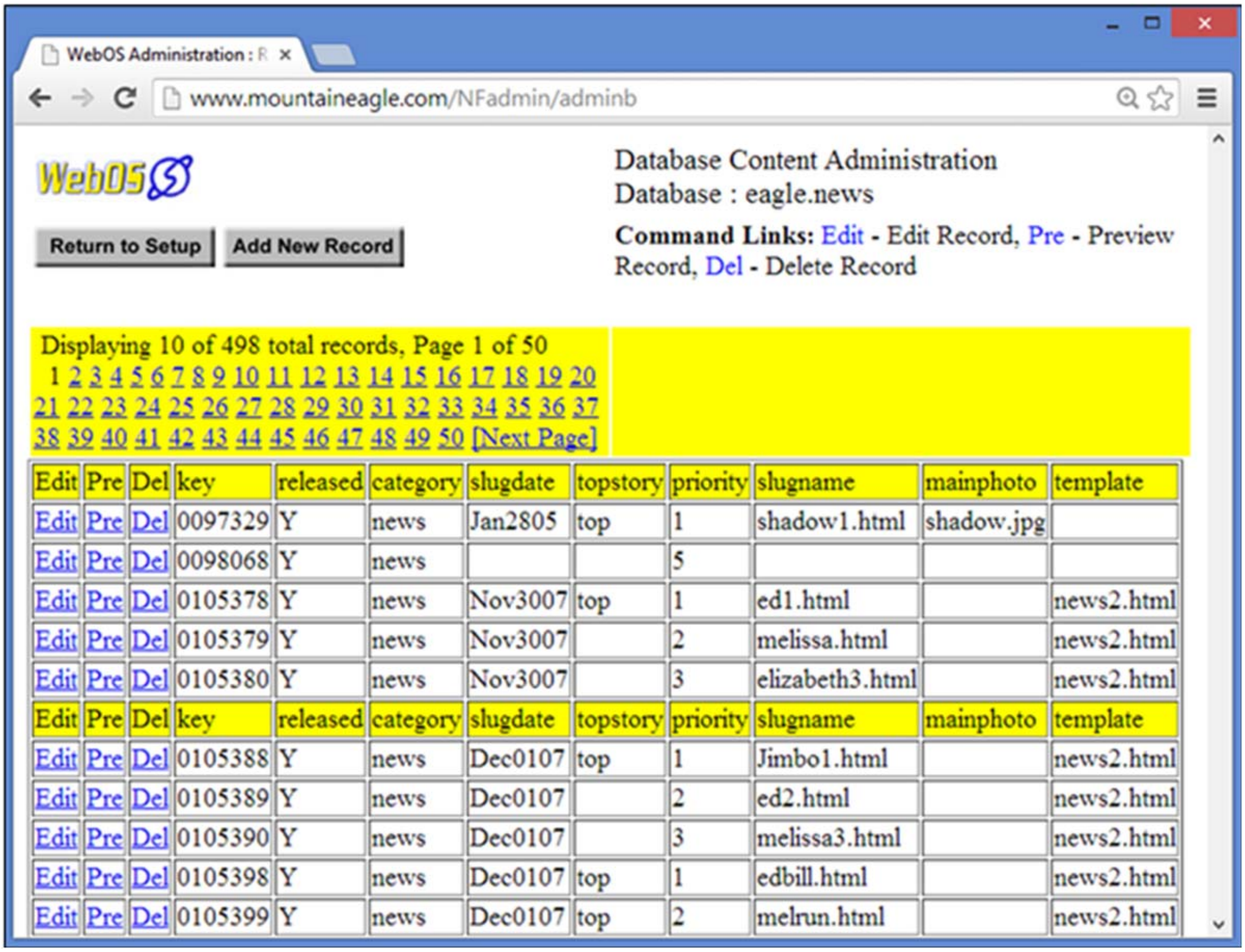
68. Newsflash clearly teaches deployment of arbitrary objects into a design framework to create a computer application or into a container page to create a website for the same reasons described below in the "deploying said arbitrary objects from said object library into a design framework to create said computer application" limitation section.

(Separates Content, Form, and Function) "Separates a content of said computer application, a form of said computer application and a functionality of said computer application"

69. The final distinct element of the preamble of the asserted independent claims is the separation of "a content of said computer application, a form of said computer application and a functionality of said computer application" by the object management framework. The phrase "that separates a content of said computer application, a form of said computer application and a functionality of said computer application" was construed by the Court to mean "that enables independently modifying and accessing content, form and function." Sept. 16, 2013 Claim Construction Order at 35.

70. Independent modification and access of content, form, and function is discussed in basic terms below in the Arbitrary Object section of the arbitrary object framework limitation of the asserted claims, and that analysis is incorporated herein by reference. Additionally, such modification and access is described and demonstrated in Newsflash, which had arbitrary objects to handle content, form, and function internally.

71. Below are screenshots from The Eagle administration pages demonstrating the independent modification and access of content:

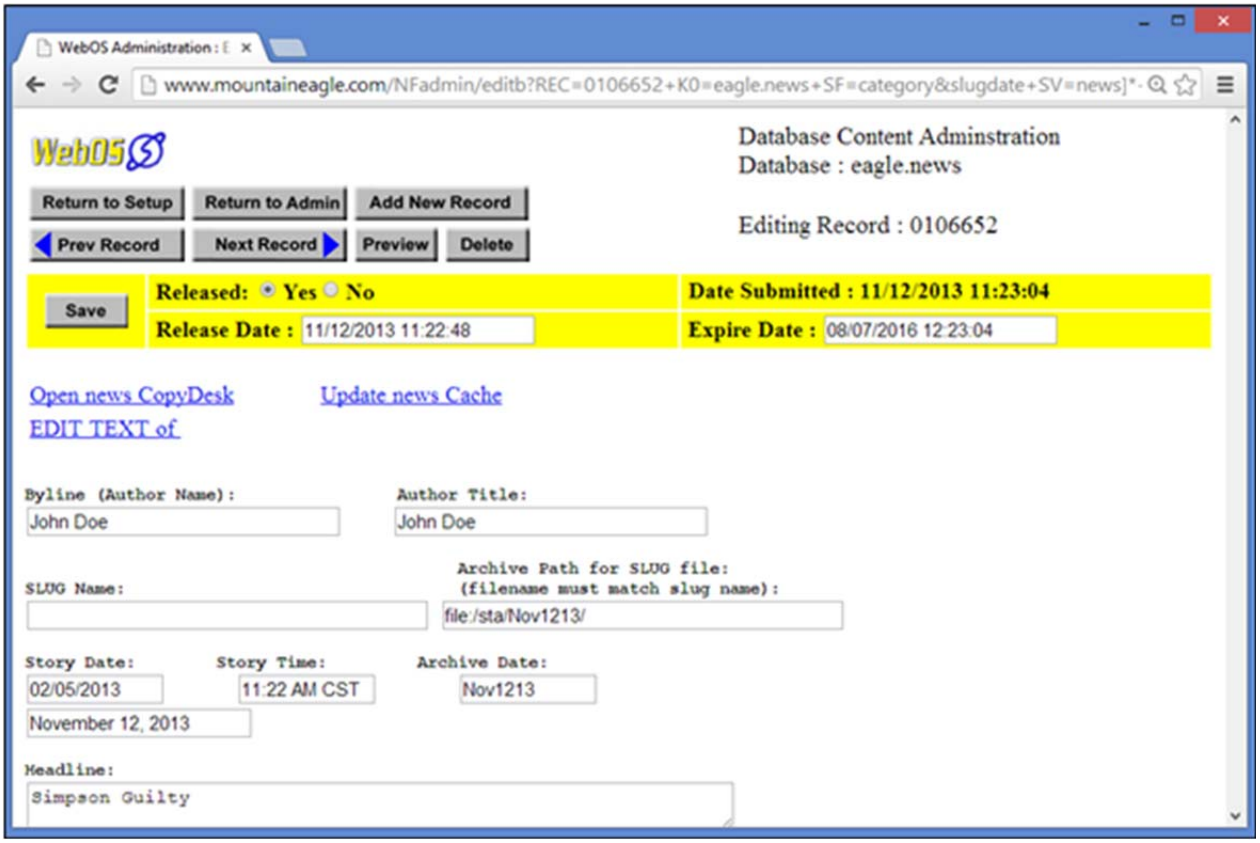


Database Content Administration
Database : eagle.news

Command Links: Edit - Edit Record, Pre - Preview Record, Del - Delete Record

Displaying 10 of 498 total records, Page 1 of 50
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 [Next Page]

Edit	Pre	Del	key	released	category	slugdate	topstory	priority	slugname	mainphoto	template
Edit	Pre	Del	0097329	Y	news	Jan2805	top	1	shadow1.html	shadow.jpg	
Edit	Pre	Del	0098068	Y	news			5			
Edit	Pre	Del	0105378	Y	news	Nov3007	top	1	ed1.html		news2.html
Edit	Pre	Del	0105379	Y	news	Nov3007		2	melissa.html		news2.html
Edit	Pre	Del	0105380	Y	news	Nov3007		3	elizabeth3.html		news2.html
Edit	Pre	Del	key	released	category	slugdate	topstory	priority	slugname	mainphoto	template
Edit	Pre	Del	0105388	Y	news	Dec0107	top	1	Jimbo1.html		news2.html
Edit	Pre	Del	0105389	Y	news	Dec0107		2	ed2.html		news2.html
Edit	Pre	Del	0105390	Y	news	Dec0107		3	melissa3.html		news2.html
Edit	Pre	Del	0105398	Y	news	Dec0107	top	1	edbill.html		news2.html
Edit	Pre	Del	0105399	Y	news	Dec0107	top	2	melrun.html		news2.html



Database Content Adminstration
Database : eagle.news

Editing Record : 0106652

Released: ● Yes ○ No

Date Submitted : 11/12/2013 11:23:04

Release Date : 11/12/2013 11:22:48

Expire Date : 08/07/2016 12:23:04

Byline (Author Name): John Doe

Author Title: John Doe

SLUG Name:

Archive Path for SLUG file: (filename must match slug name): file:/sta/Nov1213/

Story Date: 02/05/2013

November 12, 2013

Story Time: 11:22 AM CST

Archive Date: Nov1213

Headline: Simpson Guilty

72. The following reference in the code represents an object that references the content:

```
news_story_display^env REQUEST_METHOD=GET
CGI_QUERY_STRING=$QUERY_STRING
QUERY_STRING=DBNAME=eagle.news+ssiuname=#ssiuname#+ssipwd=#ssip
wd#+demo_nav_bar=#demo_nav_bar# /local1/apache/cgi-bin/shim^cgi
```

SAMSUNG_VERT00000001.

73. Additionally, using the Walls Newsflash, I was able to create the object `copyrightnotice^copyright.txt^file`, which obtains the content of the `copyright.txt`, without any function or form. SAMSUNG_VERT00060411; SAMSUNG_VERT00060391. See Exhibit B[Newsflash & WebOS separation example.docx] attached hereto and incorporated herein by reference, which demonstrates a content-only object contains independently accessible and modifiable content within the Walls Newsflash system.

74. `Eagle_nav.html` is an excellent example within the Walls Newsflash of a container file that controls the form of the page. It was responsible for formatting the navigation

portion of each page it is called from. Below is the form object responsible for inserting the contents of that file:

```
navbar^/demo_nav_bar.html^file
```

SAMSUNG_VERT00000001.

75. Additionally, using the Walls Newsflash, I was able to create the object `makespace^makespace.html^file`, which simply adds space (form only) in the formatting of a page, without any content or functionality. SAMSUNG_VERT00060411; SAMSUNG_VERT00060406. See Exhibit B[Newsflash & WebOS separation example.docx] attached hereto and incorporated herein by reference, which demonstrates a form-only object contains independently accessible and modifiable form within the Walls Newsflash system.

76. Because of the nature of the Walls Newsflash as a news site, time is important. The following object is functional in that it gets the current time and formats it for display on a Web site:

```
longdate^/usr/WWW/WebOS/utils/date +"%A, %B %d, %Y" | tr -d "\n"^cgi
```

SAMSUNG_VERT00000001.

77. Additionally, using the Walls Newsflash, I was able to create the object `mouseoverswap^mouseoverswap.html^file`, which defines functionality that allows images to change colors when the mouse is moved over them. SAMSUNG_VERT00060411. It contains no form information and no content. SAMSUNG_VERT00060407. See Exhibit B[Newsflash & WebOS separation example.docx] attached hereto and incorporated herein by reference, which demonstrates a function-only object contains independently accessible and modifiable function within the Walls Newsflash system.

78. A person of ordinary skill in the art would clearly understand that the Walls Newsflash discloses the separation of a content of said computer application, a form of said computer application, and a functionality of said computer application when it repeatedly discloses the ability to create, modify, and access many object types, each being one or a

combination of form, function and content. It is my opinion that the Walls Newsflash anticipates the separation of content, form and functionality of a computer application limitation of the independent claims by clear and convincing evidence, and thus anticipates each and every limitation of the asserted claims by clear and convincing evidence.

(Creating Arbitrary Objects) "Creating arbitrary objects with corresponding arbitrary names of various object types for generating said content of said computer application, said form of said computer application, and said functionality of said computer application"

79. See below in this "Claim 56 of the '744 patent" section regarding how Newsflash discloses "Arbitrary Objects."

80. See above in this "Claim 56 of the '744 patent" section regarding how Newsflash discloses "arbitrary objects of various object types created by the user based on individual preference."

81. See above in this "Claim 56 of the '744 patent" section regarding how Newsflash discloses "separates a content of said computer application, a form of said computer application and a functionality of said computer application."

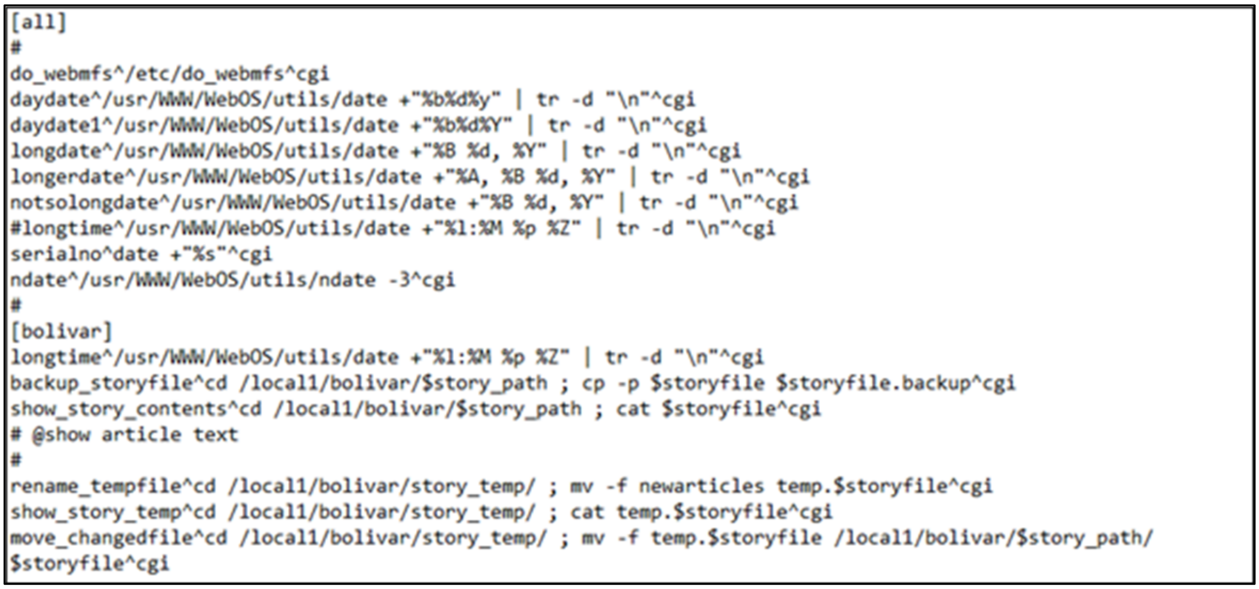
(Arbitrary Objects) "Said arbitrary objects being objects that can be created independently by individual preference, that are interchangeable, and that may be, but need not be, accessed solely by name, the object being an entity that can have form, content, or functionality or any combination of form, content, and functionality"

82. The Court's construction of "arbitrary objects" was as follows: an "object that can be created independently, that is interchangeable with other objects of the same type or of a different type, and that can be accessed by name with parameters or by name without parameters, the object being an entity that can have form, content, or functionality or any combination of form, content, and functionality." Sept. 16, 2013 Claim Construction Order at 20.

83. Newsflash clearly discloses arbitrary objects meeting all of these limitations. Arbitrary objects themselves were objects in the Newsflash system, and they were distinct and separate from the non-arbitrary (or classic) objects native to the operating system.

"Objects that can be created independently by individual preference"

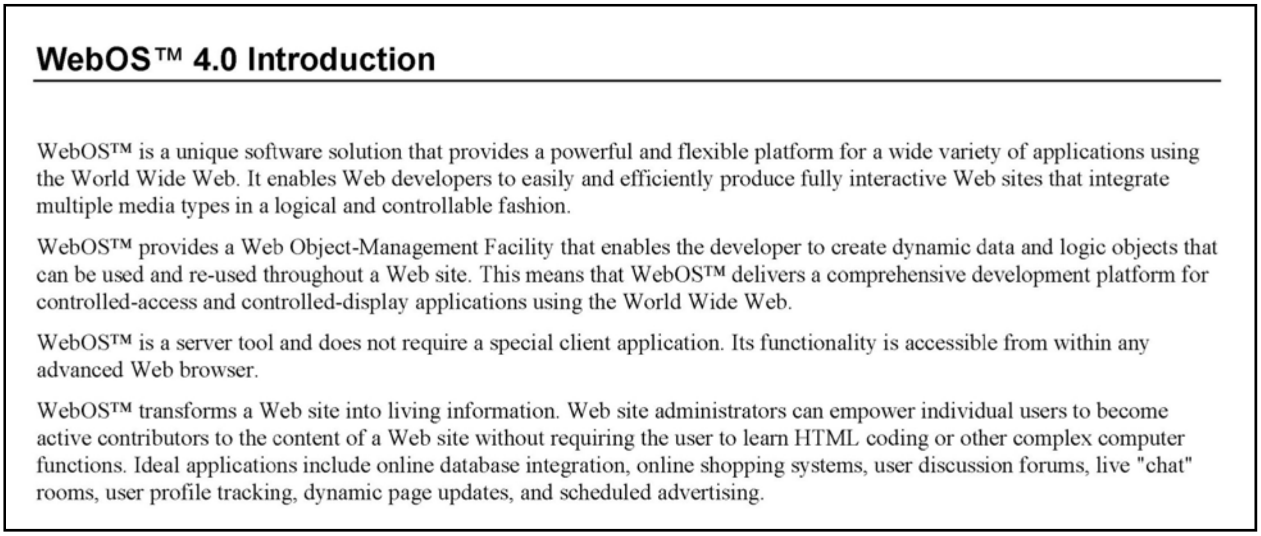
84. The only way that objects of any type were created within Newsflash was by users of the system according to their preference. New objects were created by users inserting them by individual preference into the Object Library – each line in the Walls Newsflash Object Library is a separate object. A visual text editor or WebOS Studio is used to place a new line entry into the Walls Newsflash Object Library. Once the object library is saved, the objects are created and immediately available for access and deployment as soon as the object library is saved. Below is an excerpt from the Walls Newsflash Object Library showing several arbitrary objects created independently by individual preference:



```
[all]
#
do_webmfs^/etc/do_webmfs^cgi
daydate^/usr/WWW/WebOS/utils/date +"%b%d%y" | tr -d "\n"^cgi
daydate1^/usr/WWW/WebOS/utils/date +"%b%d%Y" | tr -d "\n"^cgi
longdate^/usr/WWW/WebOS/utils/date +"%B %d, %Y" | tr -d "\n"^cgi
longerdate^/usr/WWW/WebOS/utils/date +"%A, %B %d, %Y" | tr -d "\n"^cgi
notsolongdate^/usr/WWW/WebOS/utils/date +"%B %d, %Y" | tr -d "\n"^cgi
#longtime^/usr/WWW/WebOS/utils/date +"%l:%M %p %Z" | tr -d "\n"^cgi
serialno^date +"%s"^cgi
ndate^/usr/WWW/WebOS/utils/ndate -3^cgi
#
[bolivar]
longtime^/usr/WWW/WebOS/utils/date +"%l:%M %p %Z" | tr -d "\n"^cgi
backup_storyfile^cd /local1/bolivar/$story_path ; cp -p $storyfile $storyfile.backup^cgi
show_story_contents^cd /local1/bolivar/$story_path ; cat $storyfile^cgi
# @show article text
#
rename_tempfile^cd /local1/bolivar/story_temp/ ; mv -f newarticles temp.$storyfile^cgi
show_story_temp^cd /local1/bolivar/story_temp/ ; cat temp.$storyfile^cgi
move_changedfile^cd /local1/bolivar/story_temp/ ; mv -f temp.$storyfile /local1/bolivar/$story_path/
$storyfile^cgi
```

85. A person of ordinary skill in the art would understand that the Walls Newsflash system clearly shows that objects can be created independently by individual preference.

86. The WebOS 4.0 User's Guide also discloses objects "that can be created independently by individual preference." The Introduction of the WebOS User's Guide describes WebOS being used by developers "to create dynamic data and logic objects that can be used and reused throughout a Web site" and Web site administrators to "empower individual users to become active contributors to the content of a Web site."



WebOS™ 4.0 Introduction

WebOS™ is a unique software solution that provides a powerful and flexible platform for a wide variety of applications using the World Wide Web. It enables Web developers to easily and efficiently produce fully interactive Web sites that integrate multiple media types in a logical and controllable fashion.

WebOS™ provides a Web Object-Management Facility that enables the developer to create dynamic data and logic objects that can be used and re-used throughout a Web site. This means that WebOS™ delivers a comprehensive development platform for controlled-access and controlled-display applications using the World Wide Web.

WebOS™ is a server tool and does not require a special client application. Its functionality is accessible from within any advanced Web browser.

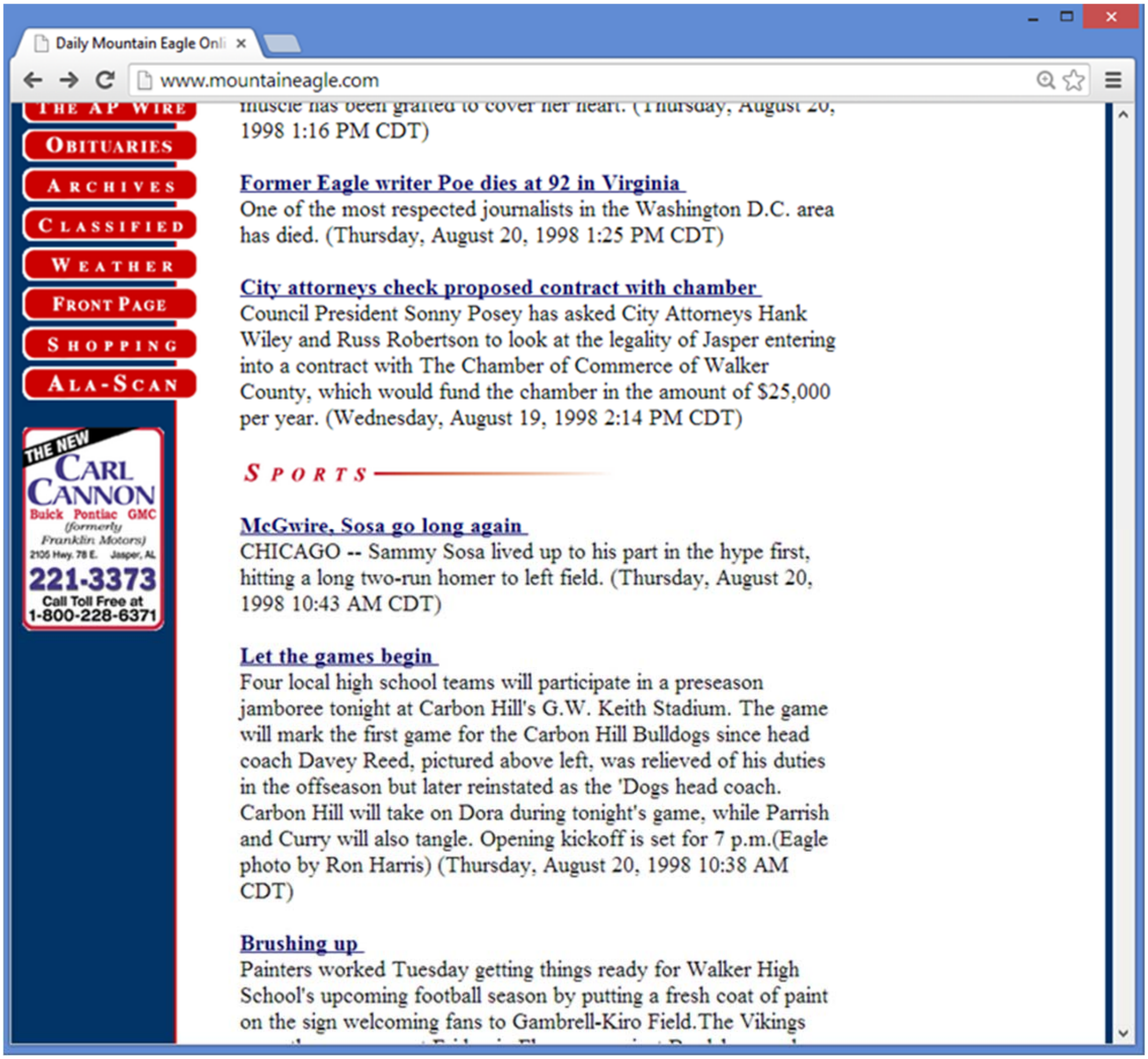
WebOS™ transforms a Web site into living information. Web site administrators can empower individual users to become active contributors to the content of a Web site without requiring the user to learn HTML coding or other complex computer functions. Ideal applications include online database integration, online shopping systems, user discussion forums, live "chat" rooms, user profile tracking, dynamic page updates, and scheduled advertising.

SAMSUNG_VERT00060281. *0*

“Objects . . . that are interchangeable with other objects of the same type or of a different type”

87. Objects in Newsflash were completely interchangeable with each other. The Walls Newsflash OMF read and scanned the container pages for object tag references, loaded the appropriate object libraries, invoked the underlying objects corresponding to the arbitrary objects accessed on the page, and inserted the generated object output into the container page. This cycle was repeated recursively for all objects on a page that were fully interchangeable in the container page.

88. To confirm this limitation in the Walls Newsflash system, I created two objects of different types using the system (SAMSUNG_VERT00060411): `carlcannonad^carlcannonad.html^file` (a form and content object, simply formatting and displaying an image) and `stockticker^bash /local1/web/htdocs/eagle/stockticker.sh^cgi` (an object comprising form, function and content that displays world stock information). SAMSUNG_VERT00060389; SAMSUNG_VERT00060497. I first accessed the `#carlcannonad#` object on a web page:



muscle has been grafted to cover her heart. (Thursday, August 20, 1998 1:16 PM CDT)

Former Eagle writer Poe dies at 92 in Virginia
One of the most respected journalists in the Washington D.C. area has died. (Thursday, August 20, 1998 1:25 PM CDT)

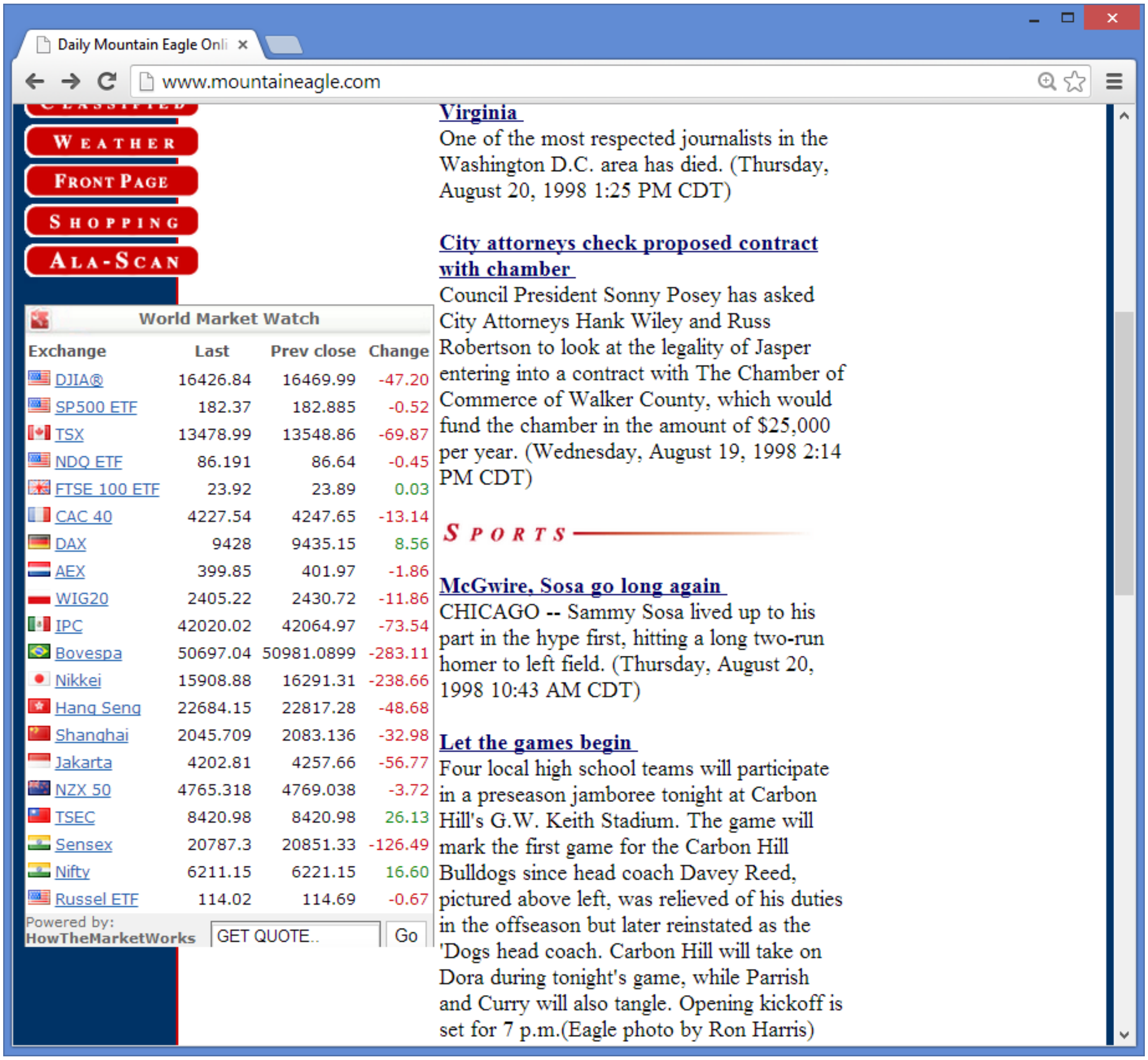
City attorneys check proposed contract with chamber
Council President Sonny Posey has asked City Attorneys Hank Wiley and Russ Robertson to look at the legality of Jasper entering into a contract with The Chamber of Commerce of Walker County, which would fund the chamber in the amount of $25,000 per year. (Wednesday, August 19, 1998 2:14 PM CDT)

McGwire, Sosa go long again
CHICAGO -- Sammy Sosa lived up to his part in the hype first, hitting a long two-run homer to left field. (Thursday, August 20, 1998 10:43 AM CDT)

Let the games begin
Four local high school teams will participate in a preseason jamboree tonight at Carbon Hill's G.W. Keith Stadium. The game will mark the first game for the Carbon Hill Bulldogs since head coach Davey Reed, pictured above left, was relieved of his duties in the offseason but later reinstated as the 'Dogs head coach. Carbon Hill will take on Dora during tonight's game, while Parrish and Curry will also tangle. Opening kickoff is set for 7 p.m.(Eagle photo by Ron Harris) (Thursday, August 20, 1998 10:38 AM CDT)

Brushing up
Painters worked Tuesday getting things ready for Walker High School's upcoming football season by putting a fresh coat of paint on the sign welcoming fans to Gambrell-Kiro Field.The Vikings

89. I then replaced the `#carlcannonad#` object with the `#stockticker#` object, which resulted in the following web page, showing that two objects of different types were clearly interchanged:



[Virginia](#)
One of the most respected journalists in the Washington D.C. area has died. (Thursday, August 20, 1998 1:25 PM CDT)

[City attorneys check proposed contract with chamber](#)
Council President Sonny Posey has asked City Attorneys Hank Wiley and Russ Robertson to look at the legality of Jasper entering into a contract with The Chamber of Commerce of Walker County, which would fund the chamber in the amount of $25,000 per year. (Wednesday, August 19, 1998 2:14 PM CDT)

SPORTS

[McGwire, Sosa go long again](#)
CHICAGO -- Sammy Sosa lived up to his part in the hype first, hitting a long two-run homer to left field. (Thursday, August 20, 1998 10:43 AM CDT)

[Let the games begin](#)
Four local high school teams will participate in a preseason jamboree tonight at Carbon Hill's G.W. Keith Stadium. The game will mark the first game for the Carbon Hill Bulldogs since head coach Davey Reed, pictured above left, was relieved of his duties in the offseason but later reinstated as the 'Dogs head coach. Carbon Hill will take on Dora during tonight's game, while Parrish and Curry will also tangle. Opening kickoff is set for 7 p.m.(Eagle photo by Ron Harris)

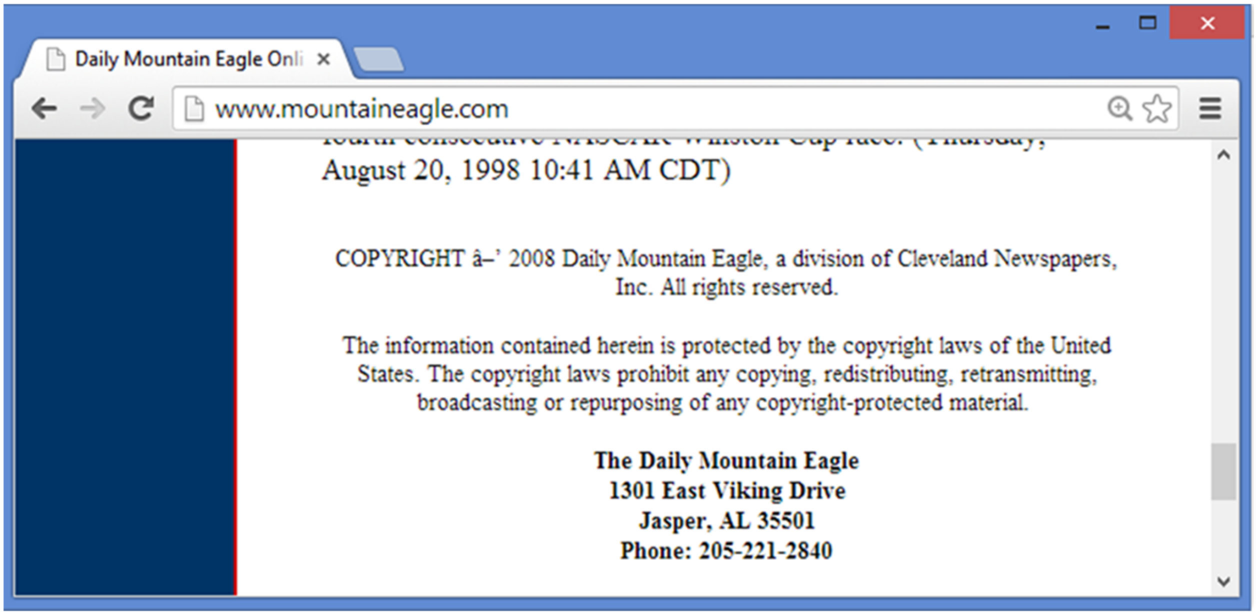
World Market Watch

Exchange	Last	Prev close	Change
DJIA®	16426.84	16469.99	-47.20
SP500 ETF	182.37	182.885	-0.52
TSX	13478.99	13548.86	-69.87
NDQ ETF	86.191	86.64	-0.45
FTSE 100 ETF	23.92	23.89	0.03
CAC 40	4227.54	4247.65	-13.14
DAX	9428	9435.15	8.56
AEX	399.85	401.97	-1.86
WIG20	2405.22	2430.72	-11.86
IPC	42020.02	42064.97	-73.54
Bovespa	50697.04	50981.0899	-283.11
Nikkei	15908.88	16291.31	-238.66
Hang Seng	22684.15	22817.28	-48.68
Shanghai	2045.709	2083.136	-32.98
Jakarta	4202.81	4257.66	-56.77
NZX 50	4765.318	4769.038	-3.72
TSEC	8420.98	8420.98	26.13
Sensex	20787.3	20851.33	-126.49
Nifty	6211.15	6221.15	16.60
Russel ETF	114.02	114.69	-0.67

Powered by: HowTheMarketWorks

90. I also created two objects of the same type using the Walls Newsflash system [SAMSUNG_VERT00060411]: `copyrightnotice^copyright.txt^file` (a content object containing the text "The information contained herein is protected by the copyright laws of the United States. The copyright laws prohibit any copying, redistributing, retransmitting, broadcasting or repurposing of any copyright-protected material.") and `copyrightnotice2^copyright2.txt^file` (a content object containing the text "THE INFORMATION CONTAINED HEREIN IS PROTECTED BY THE COPYRIGHT LAWS OF THE UNITED STATES. THE COPYRIGHT LAWS PROHIBIT ANY COPYING, REDISTRIBUTING, RETRANSMITTING, BROADCASTING OR REPURPOSING OF ANY

COPYRIGHT-PROTECTED MATERIAL.”). SAMSUNG_VERT00060391; SAMSUNG_VERT00060390. I first accessed the #copyrightnotice# object on a web page:



August 20, 1998 10:41 AM CDT)

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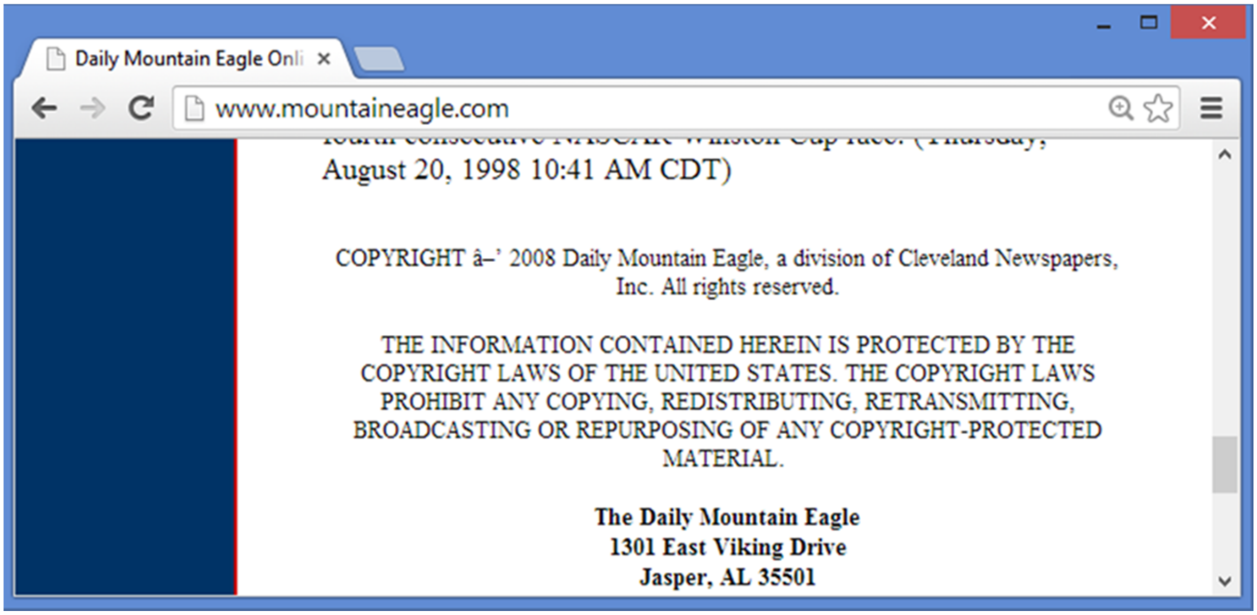
The Daily Mountain Eagle
1301 East Viking Drive
Jasper, AL 35501
Phone: 205-221-2840

91. I then replaced the #copyrightnotice# object with the #copyrightnotice2# object, which resulted in the following web page, showing that two objects of the same type were clearly interchanged:



August 20, 1998 10:41 AM CDT)

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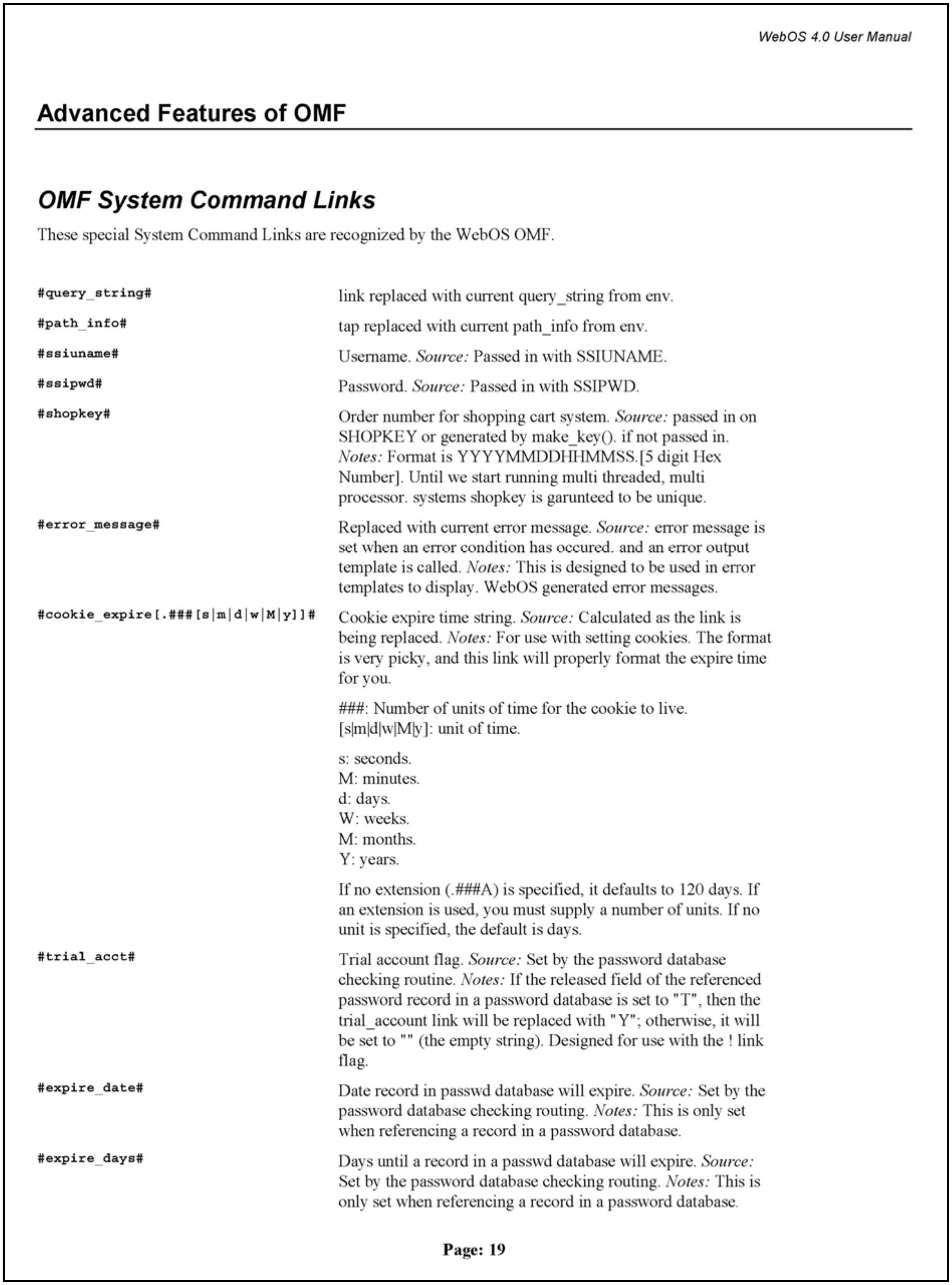
The Daily Mountain Eagle
1301 East Viking Drive
Jasper, AL 35501

"Objects . . . that can be accessed by name with parameters or by name without parameters"

92. Newsflash discloses objects that can be accessed by name with parameters or by name without parameters. One example is #cookie_expire#. As described in the WebOS 4.0 User's Guide, a user can access this object both with or without parameters:



Advanced Features of OMF

OMF System Command Links

These special System Command Links are recognized by the WebOS OMF.

#query_string# link replaced with current query_string from env.

#path_info# tap replaced with current path_info from env.

#ssiuname# Username. *Source:* Passed in with SSIUNAME.

#ssipwd# Password. *Source:* Passed in with SSIPWD.

#shopkey# Order number for shopping cart system. *Source:* passed in on SHOPKEY or generated by make_key(). if not passed in. *Notes:* Format is YYYYMMDDHHMMSS.[5 digit Hex Number]. Until we start running multi threaded, multi processor. systems shopkey is garunteed to be unique.

#error_message# Replaced with current error message. *Source:* error message is set when an error condition has occured. and an error output template is called. *Notes:* This is designed to be used in error templates to display. WebOS generated error messages.

#cookie_expire[.###[s|m|d|w|M|y]]# Cookie expire time string. *Source:* Calculated as the link is being replaced. *Notes:* For use with setting cookies. The format is very picky, and this link will properly format the expire time for you.

###: Number of units of time for the cookie to live.
[s|m|d|w|M|y]: unit of time.

s: seconds.
M: minutes.
d: days.
W: weeks.
M: months.
Y: years.

If no extension (.###A) is specified, it defaults to 120 days. If an extension is used, you must supply a number of units. If no unit is specified, the default is days.

#trial_acct# Trial account flag. *Source:* Set by the password database checking routine. *Notes:* If the released field of the referenced password record in a password database is set to "T", then the trial_account link will be replaced with "Y"; otherwise, it will be set to "" (the empty string). Designed for use with the ! link flag.

#expire_date# Date record in passwd database will expire. *Source:* Set by the password database checking routing. *Notes:* This is only set when referencing a record in a password database.

#expire_days# Days until a record in a passwd database will expire. *Source:* Set by the password database checking routing. *Notes:* This is only set when referencing a record in a password database.

SAMSUNG_VERT00060296; SEE ALSO SAMSUNG_VERT00060298 (#cookie_expire#).

93. In addition, I created a demonstration that similarly shows an object being accessed both by name with and without parameters. See also Exhibits C and D attached hereto and made a part hereof by reference for a demonstration of accessing an arbitrary object both with and without parameters using Newsflash.

94. Thus, a person of ordinary skill in the art would understand that Newsflash clearly discloses objects that can be accessed by name with parameters or by name without parameters.

"Object being an entity that can have form, content, or functionality or any combination of form, content, and functionality"

95. Objects being entities that can have form, content, or functionality or any combination of form, content, and functionality are disclosed in the Walls Newsflash implementation is shown as follows:

96. Using the Walls Newsflash, I was able to create the object `copyrightnotice^copyright.txt^file`, which obtains the content of the `copyright.txt`, without any function or form. SAMSUNG_VERT00060411; SAMSUNG_VERT00060391. I was also able to create the object `makespace^makespace.html^file`, which simply adds space (form only) in the formatting of a page, without any content or functionality. SAMSUNG_VERT00060411; SAMSUNG_VERT00060406. I was also able to create the object `mouseoverswap^mouseoverswap.html^file`, which defines functionality that allows images to change colors when the mouse is moved over them. SAMSUNG_VERT00060411. It contains no form information and no content. SAMSUNG_VERT00060407.

97. I was also able to create the object `weathericonselector ^weathericonselector.html^file`. SAMSUNG_VERT00060411. In order to only display the weather in the most appropriate spot, this object decides on the form and function of the navigation bar. Before 9am, the weather icon will show up at the top of the list. After 9am,

it shows up in its normal position further down the navigation bar. This object demonstrates functionality based on the time of day to change the form of the document. SAMSUNG_VERT00060499.

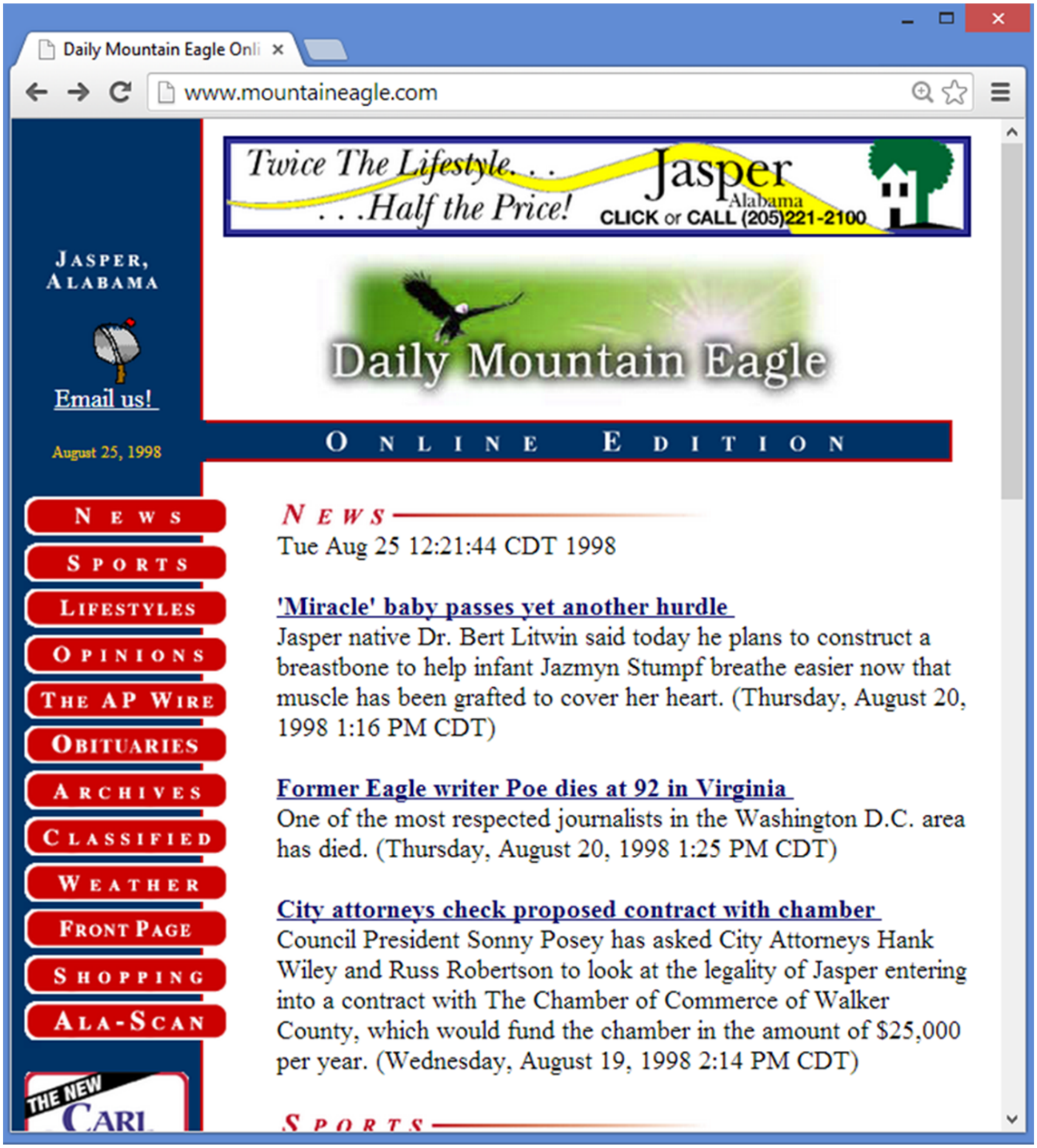
98. I was also able to create the object `emaillink^emailus.html^file`. SAMSUNG_VERT00060411. This object offers separate form (`emailus.html`) and content (`emaillink.txt`) without any functionality. SAMSUNG_VERT00060393; SAMSUNG_VERT00060392.

99. I was also able to create the object `logoselector^bash /local1/web/htdocs/eagle/logoselector.sh^cgi`. SAMSUNG_VERT00060411. This object generates a randomly colored information for display on at the top of the page. The functionality is the random selection of which image to display, and the separate content is the image itself. SAMSUNG_VERT00060405.

100. I was also able to create the object `logodisplay^logodisplay.html^file`. SAMSUNG_VERT00060411. This object positions an image container in the center of the screen and sets its width and height, so it contains form. It determines which logo to display by randomly selecting one, which is the function. The content is the image itself. The form can be managed in logodisplay.html, the function in logoselector.sh, and the images in their respective files. SAMSUNG_VERT00060404.

101. See Exhibit B attached hereto and incorporated herein by reference for additional detail demonstrating objects with form, content, functionality and any combination of form, content and functionality using the Walls Newsflash system.

102. Using all of the objects described above, the WebOS OMF engine from August of 1998 generates the following complete Web page for the Walls Media Web site for the Jasper Daily Mountain Eagle including actual news stories from 1998:



News
Tue Aug 25 12:21:44 CDT 1998

'Miracle' baby passes yet another hurdle
Jasper native Dr. Bert Litwin said today he plans to construct a breastbone to help infant Jazmyn Stumpf breathe easier now that muscle has been grafted to cover her heart. (Thursday, August 20, 1998 1:16 PM CDT)

Former Eagle writer Poe dies at 92 in Virginia
One of the most respected journalists in the Washington D.C. area has died. (Thursday, August 20, 1998 1:25 PM CDT)

City attorneys check proposed contract with chamber
Council President Sonny Posey has asked City Attorneys Hank Wiley and Russ Robertson to look at the legality of Jasper entering into a contract with The Chamber of Commerce of Walker County, which would fund the chamber in the amount of $25,000 per year. (Wednesday, August 19, 1998 2:14 PM CDT)

Sports

103. Thus, a person of ordinary skill in the art would understand that the arbitrary objects found in the Walls Newsflash can have form, content, or functionality, or any combination of the three. Furthermore, a person of ordinary skill in the art would unquestionably consider the Walls Newsflash to describe objects manifesting all of the characteristics of arbitrary objects as defined in the asserted patents and the Court’s construction thereof, and thus

it is my opinion that the Walls Newsflash clearly anticipates the arbitrary object limitation of the asserted independent claims by clear and convincing evidence.

(Managing) “Managing said arbitrary objects in an object library”

104. Newsflash clearly discloses “managing said arbitrary objects in an object library.” I observed the following 10 object library files on the disk for the Walls Newsflash implementation:

```
/local1/WWW/WebOS/configs/eagle/object_library.lib

/local1/WWW/WebOS/configs/eagle/alternate_object_library.lib

/local1/WWW/WebOS/configs/eagle/eagle_db/forum/forum_object_library.lib

/local1/WWW/WebOS/configs/eagle/object_library.lib.work

/local1/WWW/WebOS/configs/eagle/object_library.lib.good

/local1/WWW/WebOS/configs/eagle/object_library_ramdisktemp.lib

/local1/WWW/WebOS/configs/object_library.lib

/local1/WWW/WebOS/configs/object_library.lib.bak

/local1/WWW/WebOS/configs/object_library.lib.old

/local1/WWW/WebOS/configs/object_library.lib.work
```

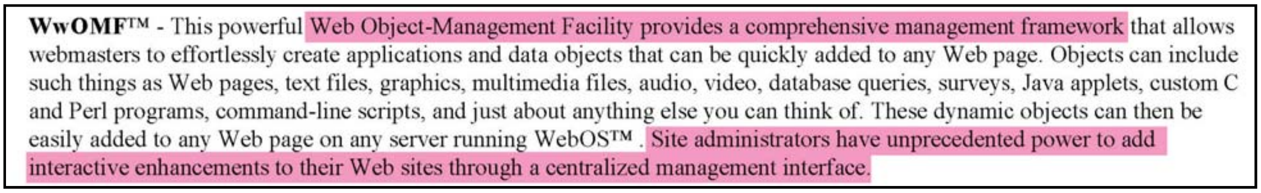
105. The primary object library is located at `/local1/WWW/WebOS/configs/object_library.lib`.

106. Within Walls Newsflash, managing of arbitrary objects already created and stored in the object library consists of the reading/reviewing, updating, and deleting of the arbitrary objects within that object library. As described above, arbitrary objects are defined as individual line entries within the object library. Thus, the management of such objects consists of viewing and editing these line entries. The Walls Newsflash system utilized at least two software tools for managing arbitrary objects. The first tool is the vi text editor program (vi being short for ‘visual editor’) which is a screen oriented text editor for creating, reading, updating, and deleting text file contents. Another tool was also available for managing arbitrary objects in an arbitrary

object library within Walls Newsflash. This product called WebOS Studio was developed by Adhesive Software.

107. To a person of ordinary skill in the art, this is clear and convincing indication that the Walls Newsflash managed arbitrary objects in an object library, and it is my opinion that this element of the asserted independent claims is disclosed by the Walls Newsflash by clear and convincing evidence. As described above, the arbitrary object contents of the object library were managed over time by creating, reviewing, updating, and deleting such contents over time as a Web site evolves.

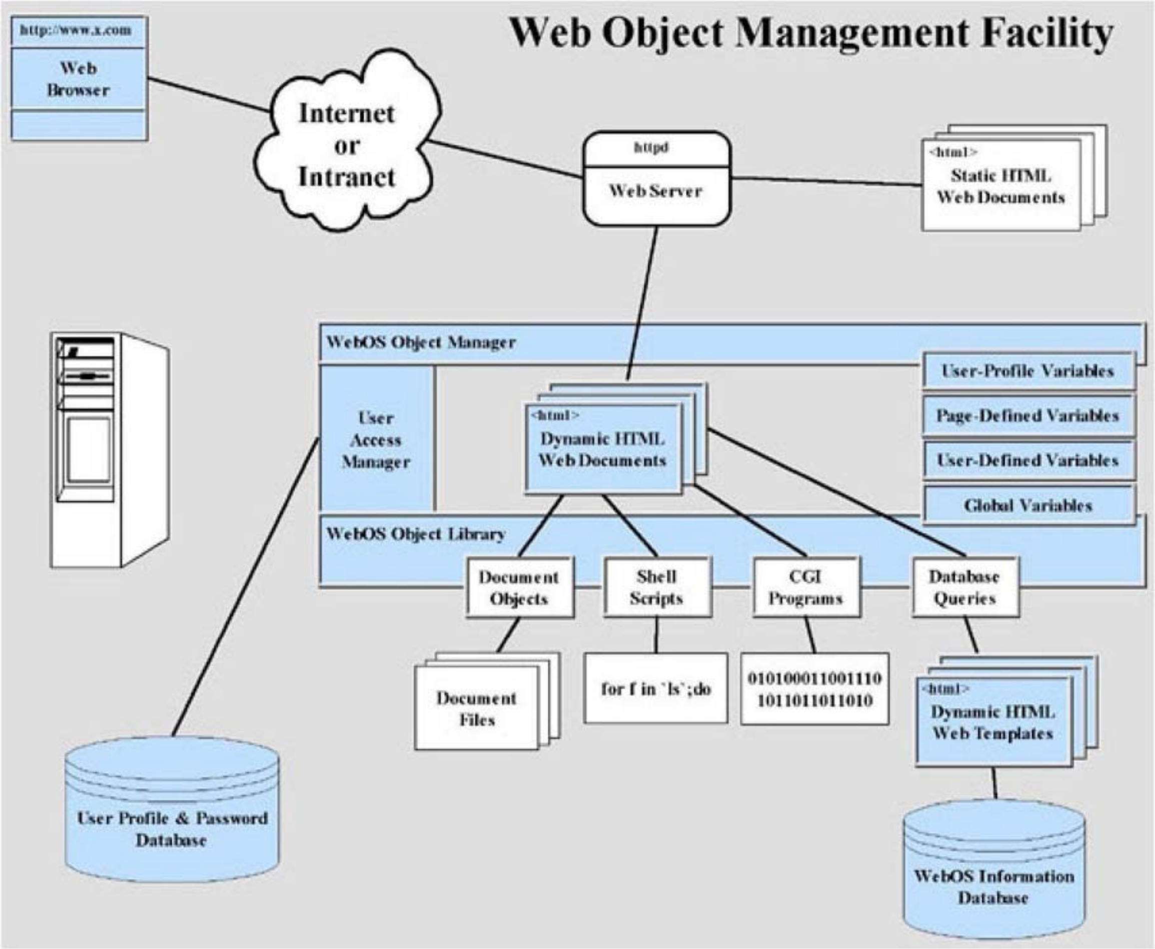
108. In addition, the WebOS 4.0 User's Guide discloses "managing said arbitrary objects in an object library" when it discloses the WwOMF. The very purpose of the OMF is to provide the mechanisms for "managing" a library of objects on web sites and pages. This management mechanism is described in the WebOS User's Guide, as "a comprehensive management framework" and a "centralized management interface" for use by site administrators. SAMSUNG_VERT00060281.



WwOMF™ - This powerful Web Object-Management Facility provides a comprehensive management framework that allows webmasters to effortlessly create applications and data objects that can be quickly added to any Web page. Objects can include such things as Web pages, text files, graphics, multimedia files, audio, video, database queries, surveys, Java applets, custom C and Perl programs, command-line scripts, and just about anything else you can think of. These dynamic objects can then be easily added to any Web page on any server running WebOS™ . Site administrators have unprecedented power to add interactive enhancements to their Web sites through a centralized management interface.

SAMSUNG_VERT00060281.

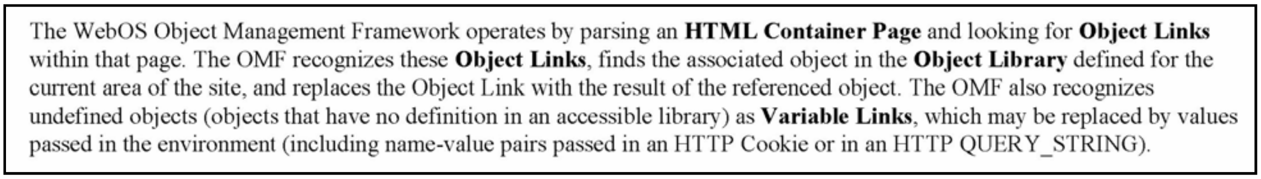
109. The Understanding the Object Management Framework section on page 7 of the WebOS User's Guide describes this sub-element very clearly as follows: "WebOS objects are organized and stored in libraries that can be configured for an entire server or specific sites and areas on a server (or a combination of these approaches)." SAMSUNG_VERT00060284. Directly below that description in the Web Object Management Facility diagram of the WebOS User's Guide, the WebOS Object Manager is a visually depicted as a central component of the WwOMF and it is directly linked to the WebOS Object Library.



SAMSUNG_VERT00060284.

110. The Web Object Management Facility diagram at SAMSUNG_VERT00060284 in the WebOS 4.0 User's Guide corresponds to FIG. 5 of the asserted patents, as described earlier. The specification of the asserted patents describes FIG. 5 (and therefore, the diagram in the Guide) as showing that "[d]ocument objects 56, shell scripts 58, CGI programs 60, and database queries 62 can be stored in WebOS object library 54." '744 patent at 5:13-15.

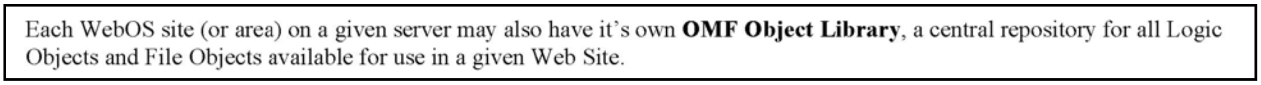
111. In addition to this clear reflection of the management of arbitrary objects in an object library, the WebOS User's Guide also discloses the use of object libraries to manage objects in a number of places including the following: "The OMF recognizes these Object Links, finds the associated object in the Object Library defined for the current area of the site, and replaces the Object Link with the result of the referenced object."



The WebOS Object Management Framework operates by parsing an **HTML Container Page** and looking for **Object Links** within that page. The OMF recognizes these **Object Links**, finds the associated object in the **Object Library** defined for the current area of the site, and replaces the Object Link with the result of the referenced object. The OMF also recognizes undefined objects (objects that have no definition in an accessible library) as **Variable Links**, which may be replaced by values passed in the environment (including name-value pairs passed in an HTTP Cookie or in an HTTP QUERY_STRING).

SAMSUNG_VERT00060285.

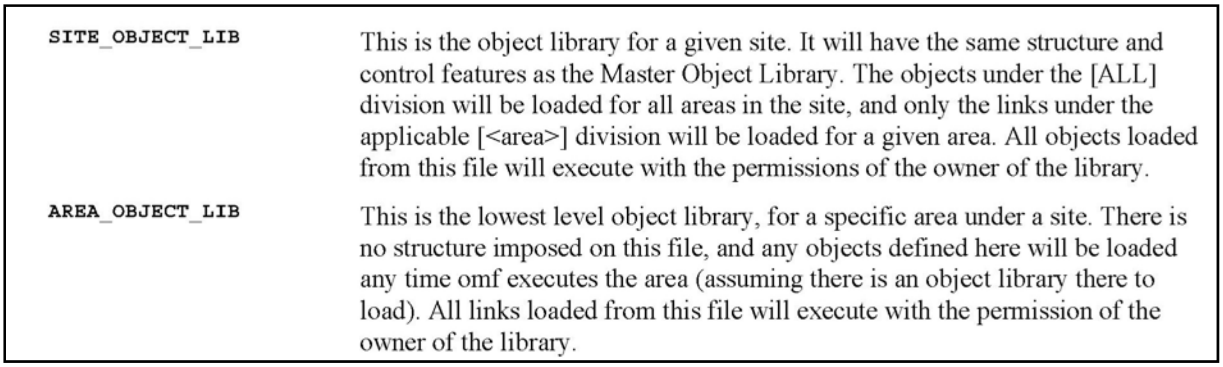
112. The Basic WebOS Configuration section of the WebOS User's Guide provides that "Each WebOS site (or area) on a given server may also have its own OMF Object Library, a central repository for all Logic Objects and File Objects available for use in a given Web Site."



Each WebOS site (or area) on a given server may also have it's own **OMF Object Library**, a central repository for all Logic Objects and File Objects available for use in a given Web Site.

SAMSUNG_VERT00060288.

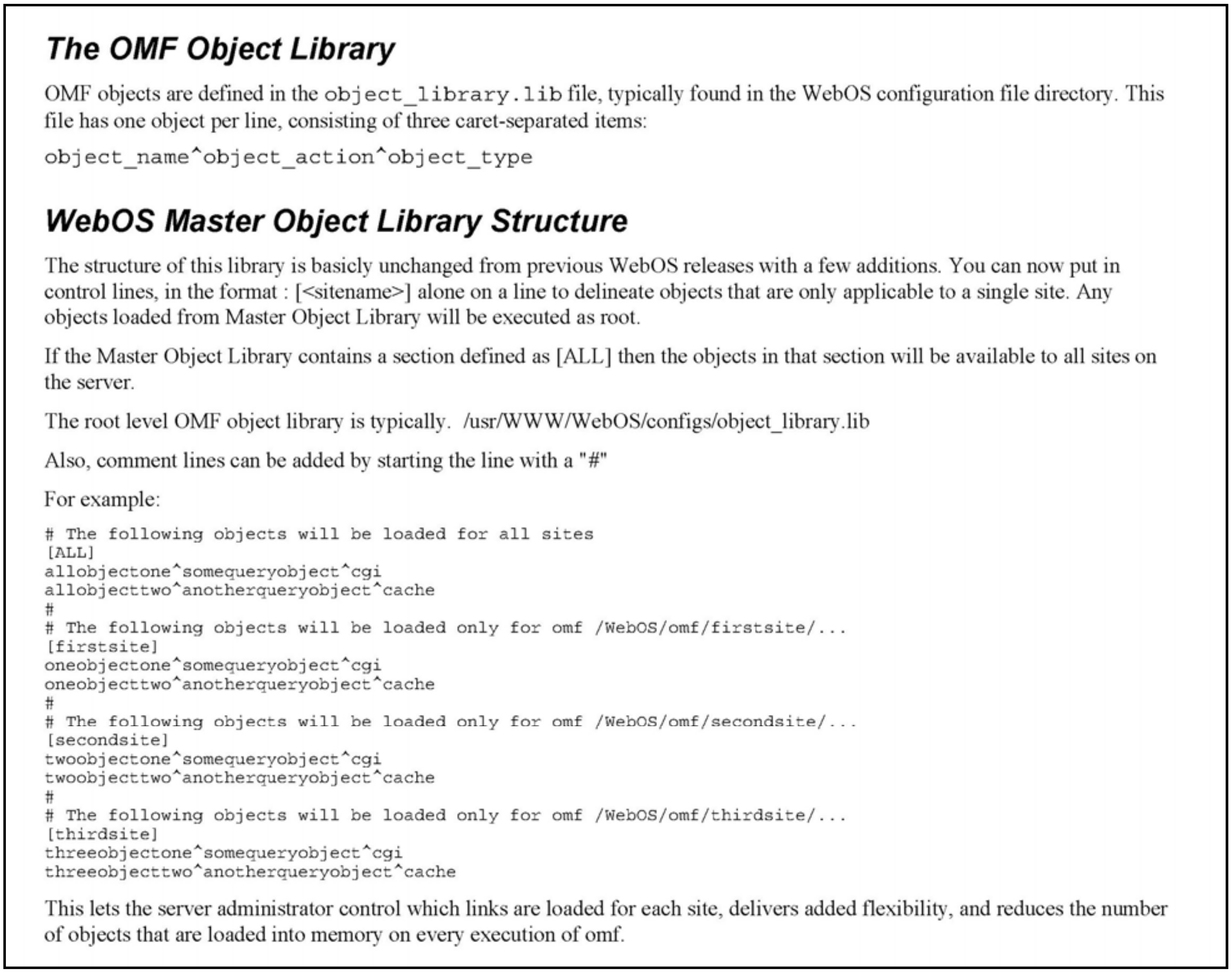
113. The WebOS Master Configuration Structure section of the WebOS User's Guide also references the following critical paths that WebOS uses:



SITE_OBJECT_LIB	This is the object library for a given site. It will have the same structure and control features as the Master Object Library. The objects under the [ALL] division will be loaded for all areas in the site, and only the links under the applicable [<area>] division will be loaded for a given area. All objects loaded from this file will execute with the permissions of the owner of the library.
AREA_OBJECT_LIB	This is the lowest level object library, for a specific area under a site. There is no structure imposed on this file, and any objects defined here will be loaded any time omf executes the area (assuming there is an object library there to load). All links loaded from this file will execute with the permission of the owner of the library.

SAMSUNG_VERT00060289.

114. The WebOS User's Guide contains specific sections entitled "The OMF Object Library" and the WebOS Master Object Library Structure:



The OMF Object Library

OMF objects are defined in the `object_library.lib` file, typically found in the WebOS configuration file directory. This file has one object per line, consisting of three caret-separated items:

```
object_name^object_action^object_type
```

WebOS Master Object Library Structure

The structure of this library is basicly unchanged from previous WebOS releases with a few additions. You can now put in control lines, in the format : [<sitename>] alone on a line to delineate objects that are only applicable to a single site. Any objects loaded from Master Object Library will be executed as root.

If the Master Object Library contains a section defined as [ALL] then the objects in that section will be available to all sites on the server.

The root level OMF object library is typically. /usr/WWW/WebOS/configs/object_library.lib

Also, comment lines can be added by starting the line with a "#"

For example:

```
# The following objects will be loaded for all sites
[ALL]
allobjectone^somequeryobject^cgi
allobjecttwo^anotherqueryobject^cache
#
# The following objects will be loaded only for omf /WebOS/omf/firstsite/...
[firstsite]
oneobjectone^somequeryobject^cgi
oneobjecttwo^anotherqueryobject^cache
#
# The following objects will be loaded only for omf /WebOS/omf/secondsite/...
[secondsite]
twoobjectone^somequeryobject^cgi
twoobjecttwo^anotherqueryobject^cache
#
# The following objects will be loaded only for omf /WebOS/omf/thirdsite/...
[thirdsite]
threeobjectone^somequeryobject^cgi
threeobjecttwo^anotherqueryobject^cache
```

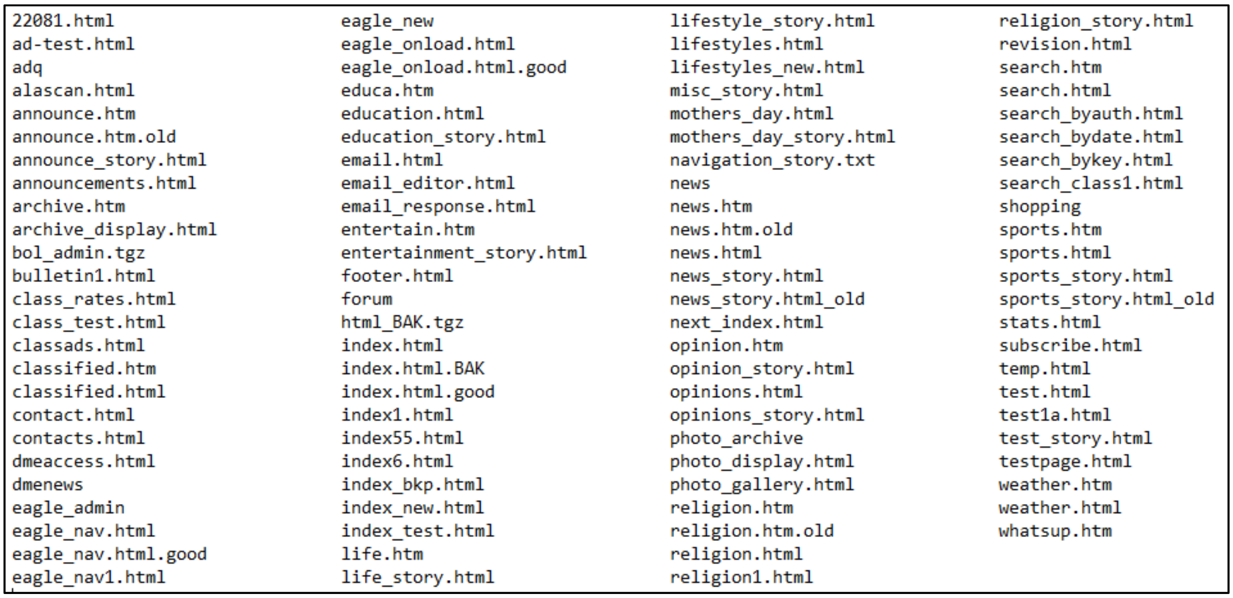
This lets the server administrator control which links are loaded for each site, delivers added flexibility, and reduces the number of objects that are loaded into memory on every execution of omf.

SAMSUNG_VERT00060292.

115. To a person of ordinary skill in the art, the WebOS 4.0 User's Guide describes "management of arbitrary objects in an object library."

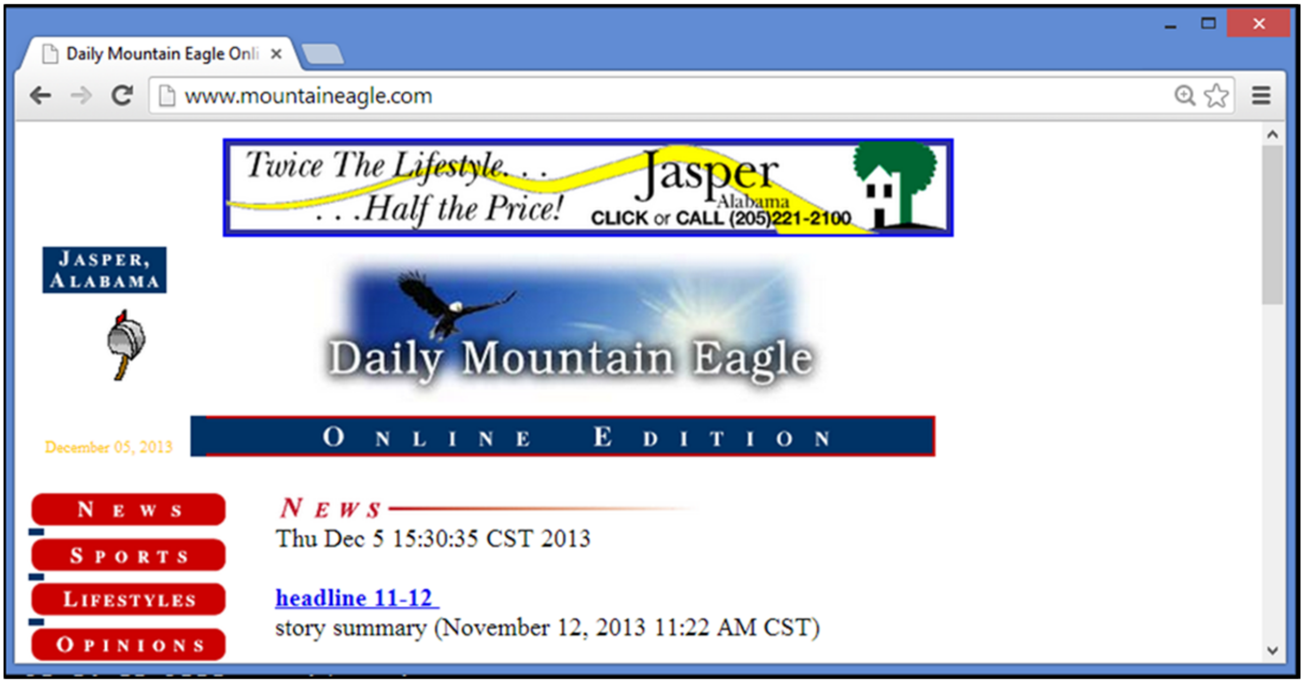
(Deploying) "Deploying said arbitrary objects from said object library into a design framework to create said computer application"

116. Newsflash clearly teaches "deploying said arbitrary objects from said object library into a design framework to create said computer application" limitation, below. A design framework is a collection of container pages. The directory /local1/web/htdocs/eagle is a collection of container pages, and it is referenced in many places by the Walls Newsflash. Following are the contents of that directory:



```
22081.html                eagle_new                  lifestyle_story.html       religion_story.html
ad-test.html              eagle_onload.html          lifestyles.html            revision.html
adq                       eagle_onload.html.good     lifestyles_new.html        search.htm
alascan.html              educa.htm                  misc_story.html            search.html
announce.htm              education.html             mothers_day.html           search_byauth.html
announce.htm.old          education_story.html       mothers_day_story.html     search_bydate.html
announce_story.html       email.html                 navigation_story.txt       search_bykey.html
announcements.html        email_editor.html          news                       search_class1.html
archive.htm               email_response.html        news.htm                   shopping
archive_display.html      entertain.htm              news.htm.old               sports.htm
bol_admin.tgz             entertainment_story.html   news.html                  sports.html
bulletin1.html            footer.html                news_story.html            sports_story.html
class_rates.html          forum                      news_story.html_old        sports_story.html_old
class_test.html           html_BAK.tgz               next_index.html            stats.html
classads.html             index.html                 opinion.htm                subscribe.html
classified.htm            index.html.BAK             opinion_story.html         temp.html
classified.html           index.html.good            opinions.html              test.html
contact.html              index1.html                opinions_story.html        test1a.html
contacts.html             index55.html               photo_archive              test_story.html
dmeaccess.html            index6.html                photo_display.html         testpage.html
dmenews                   index_bkp.html             photo_gallery.html         weather.htm
eagle_admin               index_new.html             religion.htm               weather.html
eagle_nav.html            index_test.html            religion.htm.old           whatsup.htm
eagle_nav.html.good       life.htm                   religion.html
eagle_nav1.html           life_story.html            religion1.html
```

117. The Walls Newsflash also teaches arbitrary objects are deployed into a container page to create a website. Each time a page is requested, the Object Management Framework (OMF) builds the website using a container page such as index.html to create a website:



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News

Thu Dec 5 15:30:35 CST 2013

headline 11-12

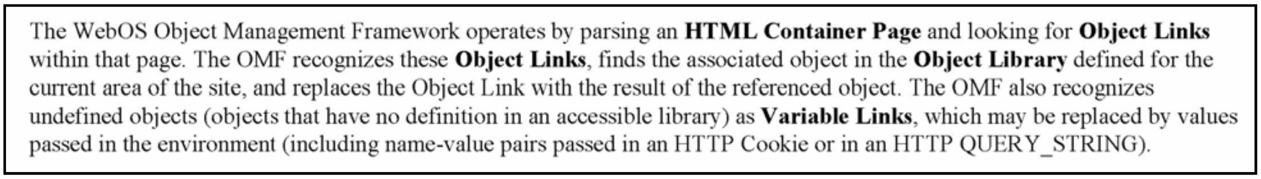
story summary (November 12, 2013 11:22 AM CST)

118. A person of ordinary skill in the art would understand the foregoing from the Walls Newsflash to clearly constitute deployment of arbitrary objects into a container page to

create a website. Furthermore, one of ordinary skill in the art would also recognize that the Walls Newsflash was also capable of deploying arbitrary objects into a design framework to generate a computer application. It is therefore my opinion that the Walls Newsflash clearly discloses the deployment of arbitrary objects into a design framework to generate a computer application or into a container page to create a website.

119. Similarly, a person of ordinary skill in the art would conclude that the Walls Newsflash clearly describes each and every element of an arbitrary object framework, and it is therefore my opinion that the Walls Newsflash clearly discloses the arbitrary object framework limitation of the asserted claims.

120. Moreover, the WebOS User's Guide references the connection between a container page and objects as follows:

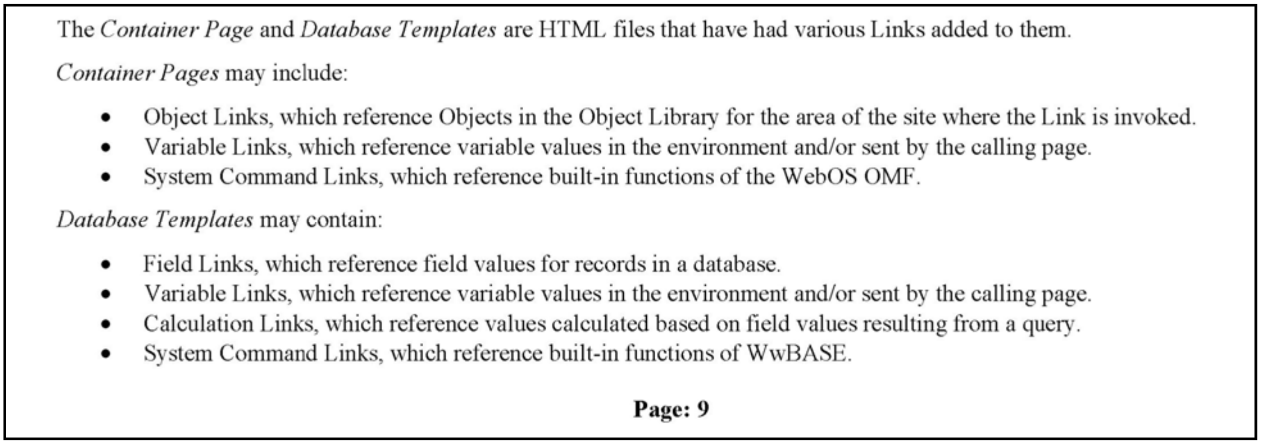


The WebOS Object Management Framework operates by parsing an **HTML Container Page** and looking for **Object Links** within that page. The OMF recognizes these **Object Links**, finds the associated object in the **Object Library** defined for the current area of the site, and replaces the Object Link with the result of the referenced object. The OMF also recognizes undefined objects (objects that have no definition in an accessible library) as **Variable Links**, which may be replaced by values passed in the environment (including name-value pairs passed in an HTTP Cookie or in an HTTP QUERY_STRING).

SAMSUNG_VERT00060285.

121. It goes on later to provide that: Container Pages may include:

- Object Links, which reference Objects in the Object Library for the area of the site where the Line is invoked,
- Variable Links, which reference variable values in the environment and/or sent by the calling page, and
- System Command Links, which reference built-in functions of WwBase.



The *Container Page* and *Database Templates* are HTML files that have had various Links added to them.

Container Pages may include:

- Object Links, which reference Objects in the Object Library for the area of the site where the Link is invoked.
- Variable Links, which reference variable values in the environment and/or sent by the calling page.
- System Command Links, which reference built-in functions of the WebOS OMF.

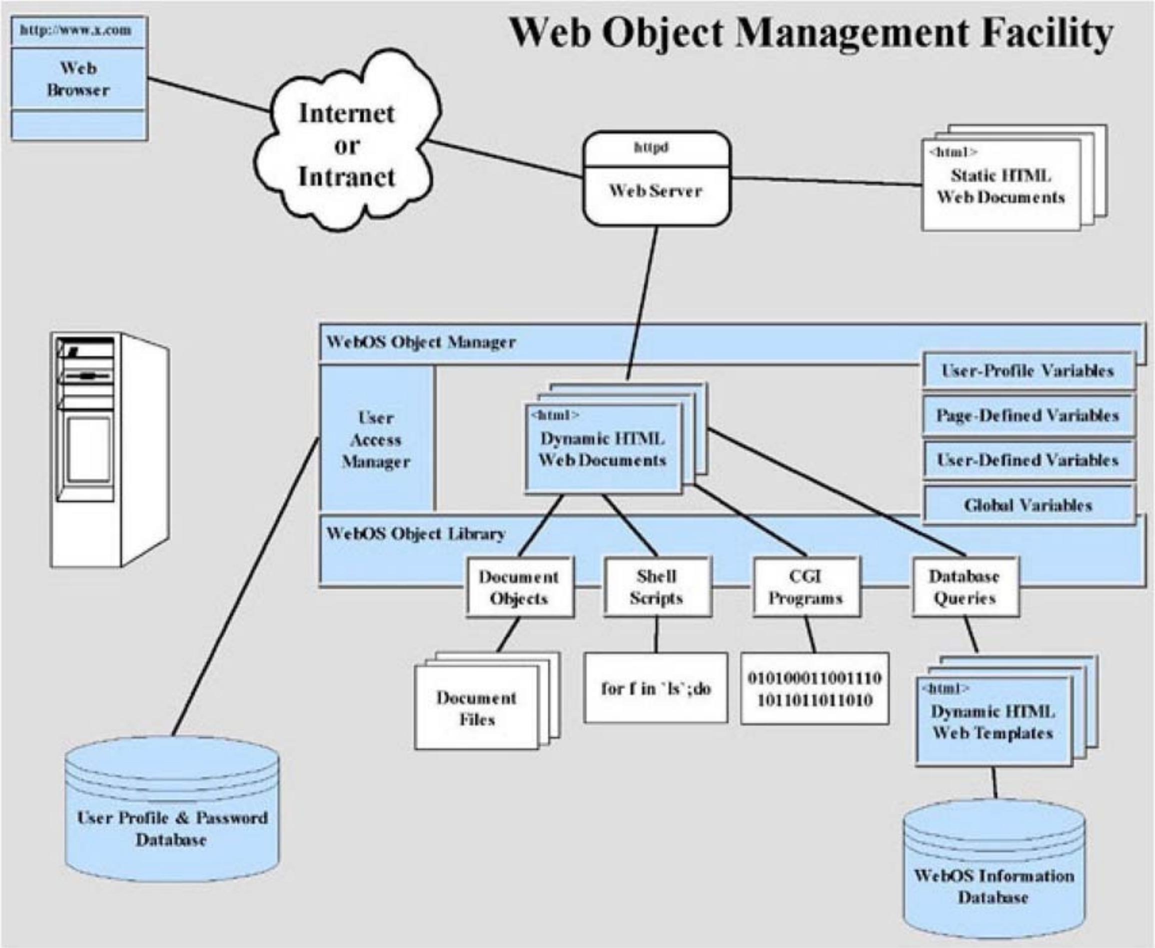
Database Templates may contain:

- Field Links, which reference field values for records in a database.
- Variable Links, which reference variable values in the environment and/or sent by the calling page.
- Calculation Links, which reference values calculated based on field values resulting from a query.
- System Command Links, which reference built-in functions of WwBASE.

Page: 9

SAMSUNG_VERT00060286.

122. The following diagram in the WebOS 4.0 User's Guide also reflects the deployment limitation:



SAMSUNG_VERT00060284.

123. A person of ordinary skill in the art would understand these excerpts from the WebOS User's Guide to disclose deployment of arbitrary objects into a container page to create a website. Furthermore, one of ordinary skill in the art would also recognize that the functionality described in the WebOS User's Guide is also capable of deploying arbitrary objects into a design framework to generate a computer application. It is therefore my opinion that the WebOS 4.0 User's Guide discloses the deployment of arbitrary objects into a design framework to generate a computer application or into a container page to create a website.

Claim 1 of the '744 Patent

124. For the reasons set for the below, it is my opinion that there is clear and convincing evidence that Newsflash anticipates claim 1 of the '744 patent.

(Preamble) "A method for generating a computer application on a host system in an arbitrary object framework that separates a content of said computer application, a form of said computer application and a functionality of said computer application"

125. Newsflash clearly discloses this Preamble limitation of claim 1 of the '744 patent for the same reasons as discussed above for the Preamble limitation of claim 56 of the '744 patent. I incorporate that analysis here.

(Creating) "Creating arbitrary objects with corresponding arbitrary names of various object types for generating said content of said computer application, said form of said computer application, and said functionality of said computer application."

126. Newsflash clearly discloses this Creating limitation of claim 1 of the '744 patent for the same reasons as discussed above for the Creating limitation in claim 56 of the '744 patent. I incorporate that analysis here.

(Managing) "Managing said arbitrary objects in an object library"

127. Newsflash clearly discloses this Managing limitation of claim 1 of the '744 patent for the same reasons as discussed above for the Managing limitation in claim 56 of the '744 patent. I incorporate that analysis here.

(Deploying) "Deploying said arbitrary objects from said object library into a design framework to create said computer application"

128. Newsflash clearly discloses this Deploying limitation of claim 1 of the '744 patent for the same reasons as discussed above for the Deploying limitation in claim 56 of the '744 patent. I incorporate that analysis here.

Claim 1 of the '629 Patent

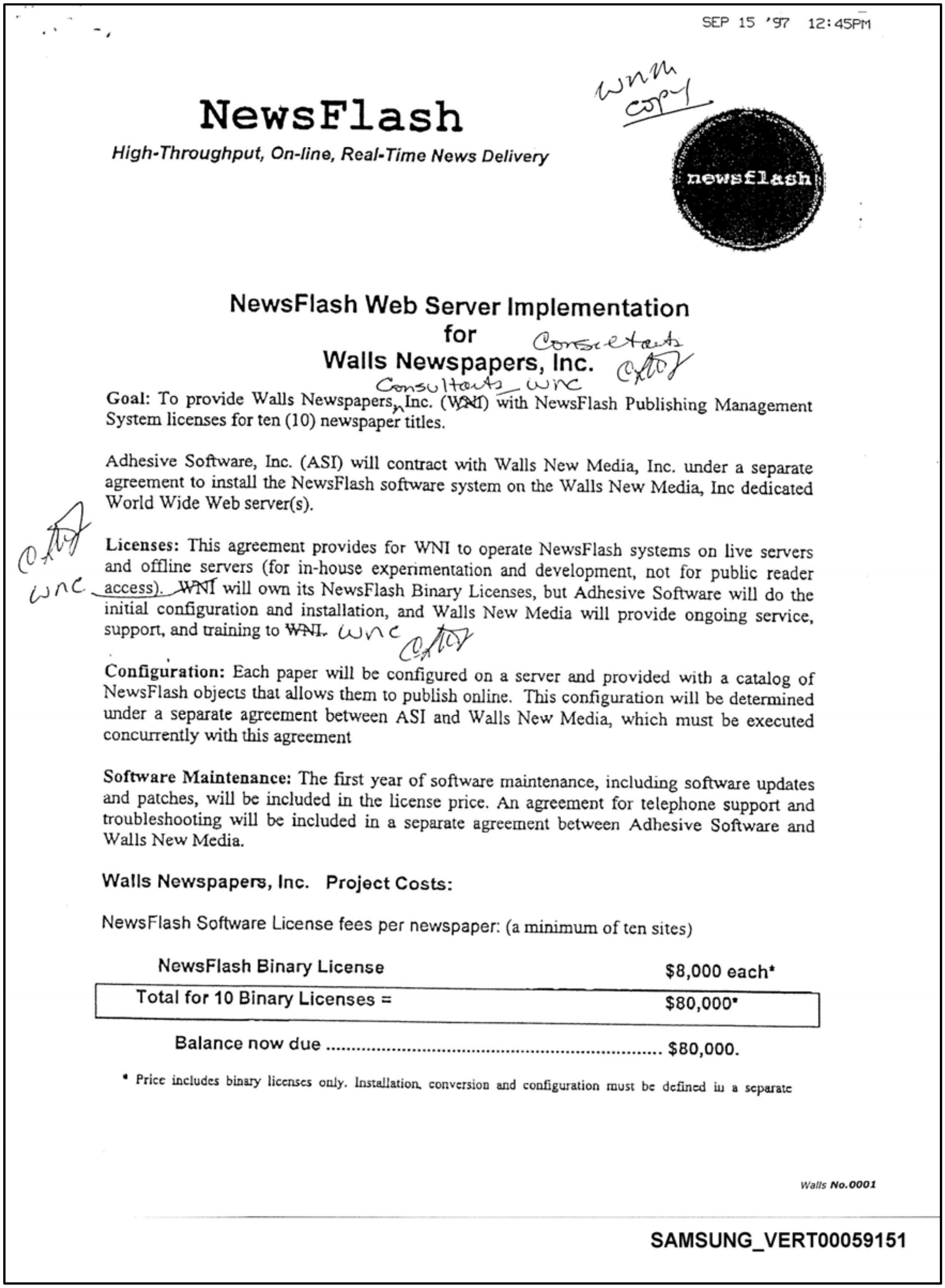
129. For the reasons set for the below, it is my opinion that there is clear and convincing evidence that Newsflash anticipates claim 1 of the '629 patent.

(Preamble) "A system for generating a computer application on a host system in an arbitrary object framework that separates a content of said computer application, a form of said computer application, and a functionality of said computer application, said system including a computer comprising a processor and a memory operably coupled to said processor, said memory being configured for storing a computer program executable by said processor"

130. Newsflash clearly discloses this Preamble limitation of claim 1 of the '629 patent for the same reasons as discussed above for the Preamble limitation in claim 56 of the '744 patent. I incorporate that analysis here.

131. The Walls Newflash was a system for generating computer applications on a host system. That host system – the server that hosted all of the Walls papers – necessarily included a computer comprising a processor and a memory operatively coupled to the processor. The memory of that server was configured for the Newsflash software, as well as other software, executable by the processor. The Walls Newsflash software was required to run on such a host system.

132. The contract between Adhesive Software and Walls Newspapers provided for Walls to "operate NewsFlash systems on live servers and offline servers":



SEP 15 '97 12:45PM

WNM copy

NewsFlash

High-Throughput, On-line, Real-Time News Delivery

newsflash

NewsFlash Web Server Implementation for Walls Newspapers, Inc. Consultants

Goal: To provide Walls Newspapers, Consultants Inc. (~~WNI~~ WNC) with NewsFlash Publishing Management System licenses for ten (10) newspaper titles.

Adhesive Software, Inc. (ASI) will contract with Walls New Media, Inc. under a separate agreement to install the NewsFlash software system on the Walls New Media, Inc dedicated World Wide Web server(s).

Licenses: This agreement provides for WNI to operate NewsFlash systems on live servers and offline servers (for in-house experimentation and development, not for public reader access). ~~WNI~~ WNC will own its NewsFlash Binary Licenses, but Adhesive Software will do the initial configuration and installation, and Walls New Media will provide ongoing service, support, and training to ~~WNI.~~ WNC

Configuration: Each paper will be configured on a server and provided with a catalog of NewsFlash objects that allows them to publish online. This configuration will be determined under a separate agreement between ASI and Walls New Media, which must be executed concurrently with this agreement

Software Maintenance: The first year of software maintenance, including software updates and patches, will be included in the license price. An agreement for telephone support and troubleshooting will be included in a separate agreement between Adhesive Software and Walls New Media.

Walls Newspapers, Inc. Project Costs:

NewsFlash Software License fees per newspaper: (a minimum of ten sites)

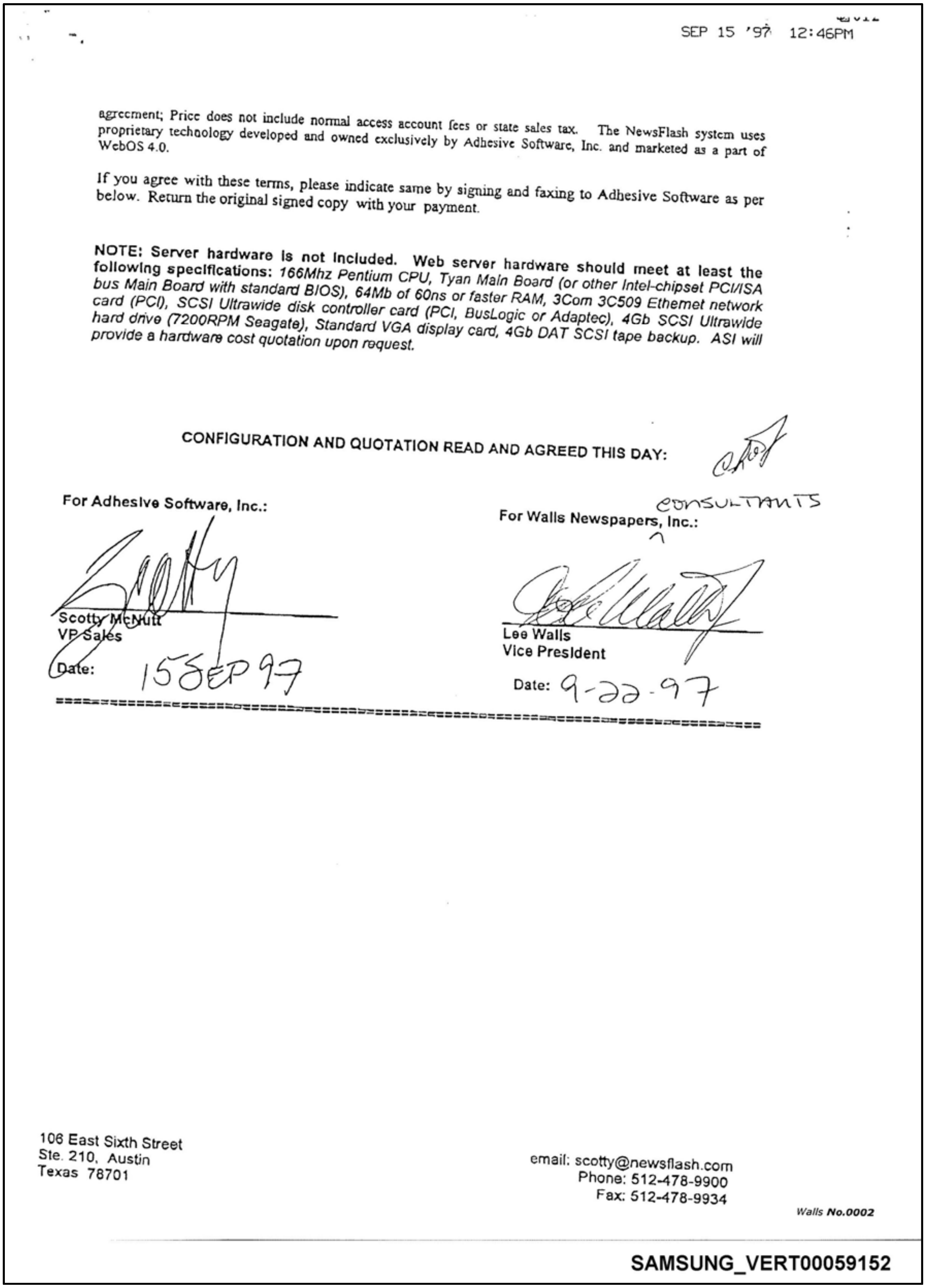
NewsFlash Binary License	$8,000 each*
Total for 10 Binary Licenses =	$80,000*
Balance now due	$80,000.

* Price includes binary licenses only. Installation, conversion and configuration must be defined in a separate

Walls No.0001

SAMSUNG_VERT00059151

SAMSUNG_VERT00059151.



SEP 15 '97 12:46PM

agreement; Price does not include normal access account fees or state sales tax. The NewsFlash system uses proprietary technology developed and owned exclusively by Adhesive Software, Inc. and marketed as a part of WebOS 4.0.

If you agree with these terms, please indicate same by signing and faxing to Adhesive Software as per below. Return the original signed copy with your payment.

NOTE: Server hardware is not included. Web server hardware should meet at least the following specifications: *166Mhz Pentium CPU, Tyan Main Board (or other Intel-chipset PCI/ISA bus Main Board with standard BIOS), 64Mb of 60ns or faster RAM, 3Com 3C509 Ethernet network card (PCI), SCSI Ultrawide disk controller card (PCI, BusLogic or Adaptec), 4Gb SCSI Ultrawide hard drive (7200RPM Seagate), Standard VGA display card, 4Gb DAT SCSI tape backup. ASI will provide a hardware cost quotation upon request.*

CONFIGURATION AND QUOTATION READ AND AGREED THIS DAY:

For Adhesive Software, Inc.:

Scotty McNutt
VP Sales

Date: 15 SEP 97

CONSULTANTS

For Walls Newspapers, Inc.:

Lee Walls
Vice President

Date: 9-22-97

==

106 East Sixth Street
Ste. 210, Austin
Texas 78701

email: scotty@newsflash.com
Phone: 512-478-9900
Fax: 512-478-9934

Walls **No.0002**

SAMSUNG_VERT00059152

SAMSUNG_VERT00059152.

(Creating) "A first set of executable instructions for creating arbitrary objects with corresponding arbitrary names of content objects used in generating said content of said computer application, form objects used in defining said form of said computer application, and function objects used in executing said functionality of said computer application each arbitrary object being separate from each other arbitrary object"

133. Newsflash clearly discloses this Creating limitation of claim 1 of the '629 patent for the same reasons as discussed above for the Creating limitation in claim 56 of the '744 patent. I incorporate that analysis here. "Executable instructions" means compiled object code software in machine readable form or scripting instructions that are translated at run time into object code software in machine readable form. In terms of Newsflash, this is the executable software that is used for "creating arbitrary objects". The Walls Newsflash implementation utilized at least two software tools that served as the first set of executable instructions for creating arbitrary objects. The first tool is the vi text editor program (vi being short for 'visual editor') which is a screen oriented text editor for creating, reading, updating, and deleting text file contents. In my interview of Bryan Bunch of Walls Media he stated that he indeed utilized both of these software tools, vi and emacs, for managing arbitrary objects in the Walls Newsflash object library. Another tool was also available as a "first set of instructions" for creating arbitrary objects in an arbitrary object library within Walls Newsflash. This product, called WebOS Studio, was developed by Adhesive Software.

(Arbitrary Objects) "Said arbitrary objects being objects that can be created independently by individual preference, that are interchangeable, and that may be, but need not be, accessed solely by name, the object being an entity that can have form, content, or functionality or any combination of form, content and functionality"

134. Newsflash clearly discloses this Arbitrary Objects limitation of claim 1 of the '629 patent for the same reasons as discussed above for the Arbitrary Objects limitation in claim 56 of the '744 patent. I incorporate that analysis here.

(Managing) "A second set of executable instructions for managing said arbitrary objects in an arbitrary object library"

135. Newsflash clearly discloses this Managing limitation of claim 1 of the '629 patent for the same reasons as discussed above for the Managing limitation in claim 56 of the '744

patent. I incorporate that analysis here. See also the discussion of executable instructions above in the Creating limitation section of claim 1 of the '629 patent.

136. Managing of arbitrary objects already created and stored in the object library means the reading/reviewing, updating, and deleting of the arbitrary objects. Newsflash utilized at least two software tools that served as the first set of executable instructions for managing arbitrary objects. The first tool is the vi text editor program (vi being short for 'visual editor') which is a screen oriented text editor for creating, reading, updating, and deleting text file contents. In my interview of Bryan Bunch of Walls Media he stated that he indeed utilized both of these software tools, vi and emacs, for managing arbitrary objects in the Walls Newsflash object library. Another tool was also available as a "first set of instructions" for managing arbitrary objects in an arbitrary object library within Walls Newsflash. This product, called WebOS Studio, was developed by Adhesive Software.

(Deploying) "A third set of executable instructions for deploying said arbitrary objects from said arbitrary object library into a design framework to create said computer application"

137. Newsflash clearly discloses this Deploying limitation of claim 1 of the '629 patent for the same reasons as discussed above for the Deploying limitation in claim 56 of the '744 patent. I incorporate that analysis here. See also the discussion of executable instructions above in the Creating limitation section of claim 1 of the '629 patent.

138. In terms Newsflash, this third set of executable instructions is the OMF which dynamically fetches and assembles (i.e. deploys) all of the appropriate arbitrary objects that are referenced in a design framework. The OMF, the central engine of the Newsflash system, is discussed in more detail in other sections of this declaration. The OMF executable engine was delivered and installed by Adhesive to Walls Media as a foundational and essential part of the Walls Newsflash. According to Bryan Bunch, the OMF was updated from time to time (most often to address software defects often called 'bugs' in software industry parlance) but the fundamental purpose and functionality of the OMF remained the same in each version.

Claim 21 of the ‘629 Patent

139. For the reasons set for the below, it is my opinion that there is clear and convincing evidence that Newsflash anticipates claim 21 of the ‘629 patent.

> **(Preamble) “A system for generating a computer application on a host system in an arbitrary object framework that separates a content of said computer application, a form of said computer application, and a functionality of said computer application, said system including a computer comprising a processor and a memory operably coupled to said processor, said memory being configured for storing a computer program executable by said processor”**

140. Newsflash discloses this Preamble limitation of claim 21 of the ‘629 patent for the same reasons as discussed above for the Preamble limitation in claim 1 of the ‘629 patent. I incorporate that analysis here.

> **(Creating) “A first set of executable instructions for creating arbitrary objects with corresponding arbitrary names of content objects used in generating said content of said computer application, form objects used in defining said form of said computer application, and function objects used in executing said functionality of said computer application”**

141. Newsflash discloses this Creating limitation of claim 21 of the ‘629 patent for the same reasons as discussed above for the Creating limitation in claim 1 of the ‘629 patent. I incorporate that analysis here.

> **(Arbitrary Objects) “Each arbitrary object being callable by name only, each arbitrary object being independently modifiable without corresponding modifications being made to any other arbitrary object, and each arbitrary object further being interchangeable with other arbitrary objects.”**

142. Newsflash discloses this Arbitrary Object limitation of claim 21 of the ‘629 patent for the same reasons as discussed above for the Arbitrary Object limitation in claim 1 of the ‘629 patent. I incorporate that analysis here.

> **(Managing) “a second set of executable instructions for managing said arbitrary objects in an arbitrary object library”**

143. Newsflash discloses this Managing limitation of claim 21 of the ‘629 patent for the same reasons as discussed above for the Managing limitation in claim 1 of the ‘629 patent. I incorporate that analysis here.

(Deploying) "A third set of executable instructions for deploying said arbitrary objects from said arbitrary object library into a design framework to create said computer application"

144. Newsflash discloses this Deploying limitation of claim 21 of the '629 patent for the same reasons as discussed above for the Deploying limitation in claim 1 of the '629 patent. I incorporate that analysis here.

The Asserted Dependent Claims

Claim 3 of the '744 Patent

145. For the reasons set for the below, it is my opinion that there is clear and convincing evidence that Newsflash anticipates claim 3 of the '744 patent.

"The method of claim 56, wherein said various object types comprise text file pointers."

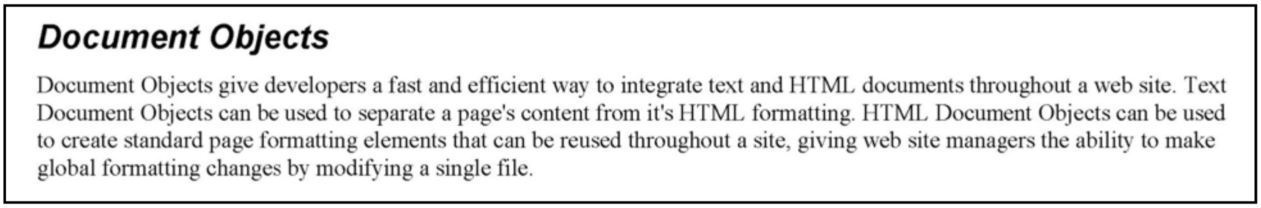
146. See above regarding Claim 56 of the '744 patent. I incorporate that analysis here. Newsflash discloses "text file pointers" objects. The object that contains a text file reference in the Walls Newsflash is the "file" type. Other types (such as CGI) can contain text file pointers as well. Here's an example of a text file pointer object defined in the main object library:

```
eagle_nav^eagle_nav.html^file
```

147. One of ordinary skill in the art would clearly understand that the Walls Newsflash discloses objects types comprising text file pointers.

148. The WebOS User's Guide discloses "text file pointers" in the initial description of OMF on page 4 where it describes objects as including, among other things, text files. SAMSUNG_VERT00060281.

149. The Document Objects section of page 8 of the WebOS User's Guide also reflects objects comprising text file pointers:

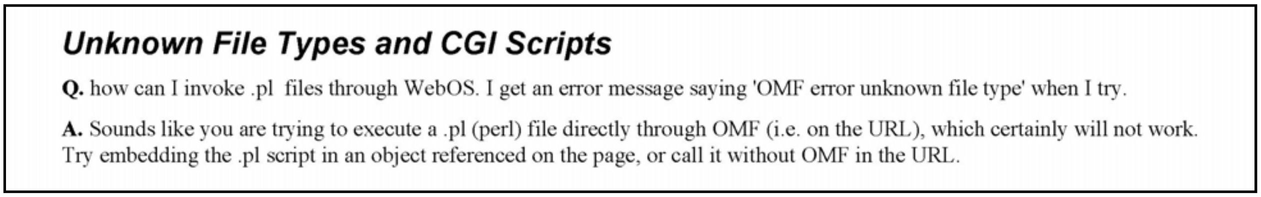


Document Objects

Document Objects give developers a fast and efficient way to integrate text and HTML documents throughout a web site. Text Document Objects can be used to separate a page's content from it's HTML formatting. HTML Document Objects can be used to create standard page formatting elements that can be reused throughout a site, giving web site managers the ability to make global formatting changes by modifying a single file.

SAMSUNG_VERT00060285.

150. The Unknown File Types and CGI Scripts section on page 50 also references objects comprising text file pointers:



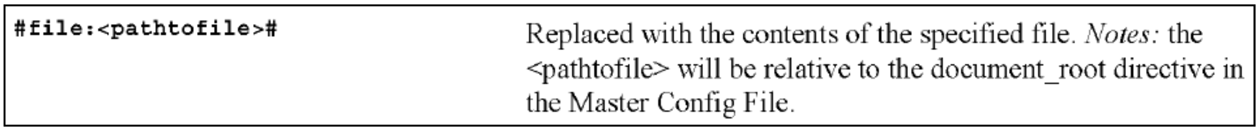
Unknown File Types and CGI Scripts

Q. how can I invoke .pl files through WebOS. I get an error message saying 'OMF error unknown file type' when I try.

A. Sounds like you are trying to execute a .pl (perl) file directly through OMF (i.e. on the URL), which certainly will not work. Try embedding the .pl script in an object referenced on the page, or call it without OMF in the URL.

SAMSUNG_VERT00060327.

151. Page 20 of the Guide references "<pathtofile>", which a person of ordinary skill in the art would understand to mean a pointer to a specified file, including a text file:



#file:<pathtofile>#	Replaced with the contents of the specified file. *Notes:* the <pathtofile> will be relative to the document_root directive in the Master Config File.

SAMSUNG_VERT00060297.

152. Thus, one of ordinary skill in the art would clearly understand that the WebOS User's Guide clearly discloses object types comprising text file pointers.

Claim 4 of the '744 Patent

153. For the reasons set for the below, it is my opinion that there is clear and convincing evidence that Newsflash anticipates claim 4 of the '744 patent.

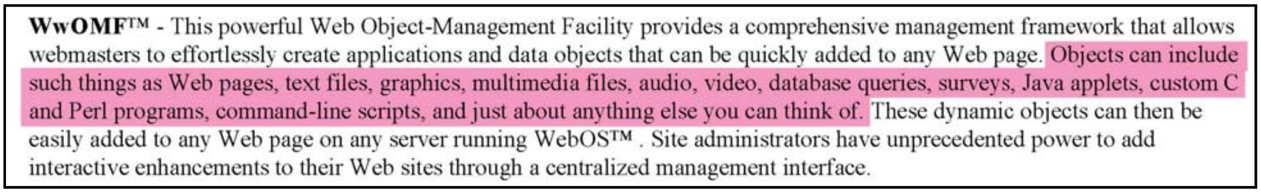
> **"The method of Claim 56, wherein said various object types comprise binary file pointers."**

154. See above regarding Claim 56 of the '744 patent. I incorporate that analysis here. A binary file pointer is used to refer to a wide variety of file types, and covers essentially all files types other than text files. Similar to "text file pointers", Newsflash discloses "binary file pointers". The Walls Newsflash shipped with a binary file called "date." Date gets the current date from the system and formats it according to how it is called. The following object comprises a binary file pointer:

```
longdate^/usr/WWW/WebOS/utils/date +"%A, %B %d, %Y" | tr -d "\n"^cgi
```

155. One of ordinary skill in the art would clearly understand that the Walls Newsflash discloses object types comprising binary file pointers.

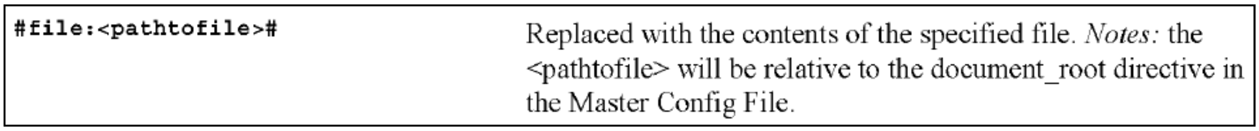
156. Similar to "text file pointers", the WebOS 4.0 User Guide discloses "binary file pointers" in the WwOMF section of the Introduction on page 4 when it refers to graphics, multimedia files, audio, video and other file types.



WwOMF™ - This powerful Web Object-Management Facility provides a comprehensive management framework that allows webmasters to effortlessly create applications and data objects that can be quickly added to any Web page. Objects can include such things as Web pages, text files, graphics, multimedia files, audio, video, database queries, surveys, Java applets, custom C and Perl programs, command-line scripts, and just about anything else you can think of. These dynamic objects can then be easily added to any Web page on any server running WebOS™ . Site administrators have unprecedented power to add interactive enhancements to their Web sites through a centralized management interface.

SAMSUNG_VERT00060281.

157. Page 20 of the Guide references "<pathtofile>", which a person of ordinary skill in the art would understand to mean a pointer to a specified file, including a binary file:



`#file:<pathtofile>#`	Replaced with the contents of the specified file. *Notes:* the <pathtofile> will be relative to the document_root directive in the Master Config File.

SAMSUNG_VERT00060297.

158. Thus, one of ordinary skill in the art would clearly understand that the WebOS User's Guide discloses object types comprising binary file pointers.

Claim 17 of the '744 Patent

159. For the reasons set for the below, it is my opinion that there is clear and convincing evidence that Newsflash anticipates claim 17 of the '744 patent.

"The method of claim 1, further comprising deploying arbitrary objects locally."

160. Claim 1 of the '744 patent was cancelled during the reexamination process, but in the course of preparing its final reexam certificate, the patent examiner apparently overlooked the fact that Claim 17 referred back to claim 1. Nonetheless, claim 1 is identical to Claim 56 except to the extent that Claim 56 attempts to define/describe an arbitrary object. In the Court's claim construction memorandum and opinion, this distinction was removed when the court

applied the same construction of the term/phrase arbitrary object to both claims. Therefore, for all intents and purposes relevant to this matter, claim 1 and claim 56 are identical. See above regarding Claim 1 of the ‘744 patent. I incorporate that analysis here. In particular, see the subsection on the hierarchical structure of arbitrary objects limitation of the asserted independent claims. The relationship between the local/global distinction is directly tied to the technology’s use of a hierarchical structure in the patent specification. All of the objects referenced in this declaration, as well as all of those in Newsflash, were deployed locally. Under no circumstances are they sent to the client or other remote system for deployment.

161. One of ordinary skill in the art would clearly understand that Newsflash discloses the deployment of arbitrary objects locally by clear and convincing evidence.

Claim 25 of the ‘744 Patent

162. For the reasons set for the below, it is my opinion that there is clear and convincing evidence that Newsflash anticipates claim 25 of the ‘744 patent.

> **“The method of claim 56, further comprising generating arbitrary objects in a programming language that is compatible or supported by said host system.”**

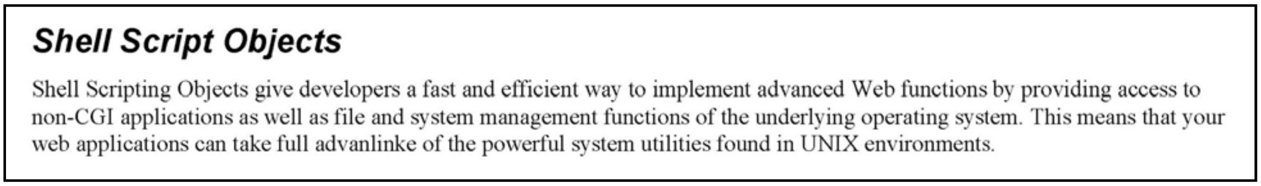
163. See above regarding Claim 56 of the ‘744 patent. I incorporate that analysis here. Any programming language that was compatible or supported by said host system could be used to generate an arbitrary object with the Walls Newsflash that would be compatible with the host system.

```
longdate^/usr/WWW/WebOS/utils/date +"%A, %B %d, %Y" | tr -d "\n"^cgi
```

164. To one of ordinary skill in the art, a CGI script represents the ability to use a variety of programming languages compatible with the host system.

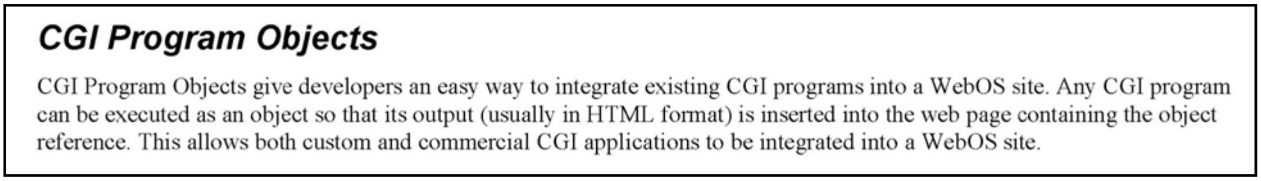
165. One of ordinary skill in the art would clearly understand that the Walls Newsflash discloses the generation of arbitrary objects in a programming language that is compatible or supported by the host system.

166. In addition, the WebOS User's Guide discloses arbitrary objects generated in programming languages compatible or supported by the host system when it describes the usage of CGI programs and shell scripts. As a person of ordinary skill in the art knows, CGI programs and shell scripts must be constructed in a programming language that is compatible with the host system, or else they will not be able usable on the host system.



Shell Script Objects

Shell Scripting Objects give developers a fast and efficient way to implement advanced Web functions by providing access to non-CGI applications as well as file and system management functions of the underlying operating system. This means that your web applications can take full advanlinke of the powerful system utilities found in UNIX environments.



CGI Program Objects

CGI Program Objects give developers an easy way to integrate existing CGI programs into a WebOS site. Any CGI program can be executed as an object so that its output (usually in HTML format) is inserted into the web page containing the object reference. This allows both custom and commercial CGI applications to be integrated into a WebOS site.

SAMSUNG_VERT00060285.

167. One of ordinary skill in the art would clearly understand that the WebOS User's Guide discloses the generation of arbitrary objects in a programming language that is compatible or supported by the host system.

Claim 24 of the '629 Patent

168. For the reasons set for the below, it is my opinion that there is clear and convincing evidence that Newsflash anticipates claim 24 of the '629 patent.

> **"The system of claim 21, wherein the third set of executable instructions are for deploying arbitrary objects locally."**

169. See above regarding Claim 21 of the '629 patent. See above regarding Claim 17 of the '744 patent. I incorporate that analysis here.

Claim 28 of the '629 Patent

170. For the reasons set for the below, it is my opinion that there is clear and convincing evidence that the Newsflash anticipates claim 28 of the '629 patent.

> **"The system of claim 21, wherein the third set of executable instructions include instructions to access and deploy arbitrary objects into said design framework using said corresponding arbitrary names."**

171. See above regarding Claim 21 of the '629 patent. I incorporate that analysis here.

Claim 32 of the '629 Patent

172. For the reasons set for the below, it is my opinion that there is clear and convincing evidence that Newsflash anticipates claim 32 of the '629 patent.

> **"The system of claim 21, further comprising executable instructions for generating arbitrary objects in a programming language that is compatible and supported by said host system."**

173. See above regarding Claim 21 of the '629 patent. See above regarding Claim 25 of the '744 patent. I incorporate that analysis here.

Syndication

174. Shortly after I completed the January 8 Report, Vertical made the sole named inventor on the '744 and '629 patents, Aubrey McAuley, available for deposition on January 11, 2014. I was present at Mr. McAuley's deposition and also have been provided the transcript of such deposition for review. In the course of his deposition, Mr. McAuley identified certain new information and detail regarding what he considered to be the distinction between the patented invention and the prior art, including, in particular, the prior versions of Mr. McAuley's own WebOS and WebOS-based products such as NewsFlash.

175. In summary, Mr. McAuley describes what he considers the differences between his invention and the prior art Newsflash/WebOS 4.0 systems (see my January 8 Report) as the addition of two related capabilities:

> The capability to change multiple web pages across a Web site through changes to a shared template (as opposed to the less efficient process of making the same changes to multiple/many pages and templates); and
>
> The capability to make a change to a single/shared object that affects and propagates to multiple/many different Web sites (as opposed to the less efficient process of making the same changes to multiple/many Web sites).

176. As at least a person of ordinatry skill in the art who is familiar with Newsflash and WebOS, these “differences” clearly relate to the ability to simultaneously define and deploy objects that are “global” (i.e., they apply to all Web sites) and “local” (i.e., they apply to a specific Web site). According to Mr. McAuley, using this mechanism, a Web site can be a combination of both global and local objects which could provide resource efficiency when scaling to multiple/many Web sites.

177. Syndication is a model in which certain Web site material is made available to multiple other sites. Most commonly, syndication refers to making information feeds available from a site in order to provide other people with a summary or update of the Web site's recently added content (for example, the latest news or forum posts). Indeed, Mr. McAuley made a direct connection between his alleged invention differentiators and syndication in his recent deposition testimony through particular references to syndication in the specification of the patents-in-suit. Notably, the dependent claim related to syndication of content and function in the ‘744 patent (claim 53) was not asserted by Vertical.

178. Mr. McAuley introduced another term in his recent deposition, “Dynamic Web Repurposing,” or DWR, that relates directly to syndication capabilities as well. The use and reuse of objects globally and locally allows new Web sites to be quickly created (*i.e.*, syndicated) from a primary web site. Such a new Web site can then be customized as desired by only updating particular objects (*e.g.*, a different look and feel) while efficiently keeping and sharing other appropriate objects as desired.[1] Once a new Web site is repurposed it shares the same management differentiators as described above for changes within and among a family of Web sites. Thus, for the purposes of the declaration I will refer to what Mr. McAuley identifies in his January 11, 2014 deposition as the differentiating capability between the invention of the ‘744

[1] Note that this understanding of DWR and its connection to syndication is based upon marketing materials of Adhesive, which were investigated upon hearing the new testimony of Mr. McAuley.

and ‘629 patents and the prior art (specifically including the Walls New Media Newsflash implementation and the WebOS 4.0 User’s Guide) as “Syndication/DWR”.

179. I was aware that the ‘744 patent contained a dependent claim to the method of claim 56 of such patent wherein the content and function of a website can be syndicated (claim 53 of the ‘744 patent). However, it was not my understanding that Syndication/DWR was the inventive differentiator of the inventions from the prior art, particularly given that syndication is not an express limitation of the asserted claims and that the syndication claim 53 of the ‘744 patent was not even asserted in the present case.

180. It is my opinion that there is clear and convincing evidence that the Newsflash system discloses Syndication/DWR, and was on sale, sold, and in public use more than one year before the filing date of the patents-in-suit.

181. As demonstrated through my hands-on use of the Newsflash system, the Newsflash system discloses Syndication/DWR. Using the Newsflash system, I have personally performed and demonstrated Syndication/DWR as described by Mr. McAuley. The method and corresponding configuration and screenshots which I used to perform and demonstrate such Syndication/DWR within the Newsflash system is set forth in Exhibit E. Additionally, I saw evidence in the software that Walls Media was utilizing Syndication/DWR for managing multiple newspaper web sites using Newsflash, which is consistent with my interview of Brian Bunch in which he indicated that Walls Media was in fact doing this prior to October 1, 1998.

182. It is worth noting that the ‘744 Patent actually references Adhesive Software’s WebOS as an embodiment of the invention, and it is my opinion that Newsflash is consistent with that conclusion. As described previously, Adhesive Software’s Newsflash software product utilized and was built upon Adhesive’s WebOS software for building and maintaining the dynamic Web sites of newspaper publishers.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Executed on February 19, 2014.

Monty Myers

EXHIBIT A

Monty G. Myers P.E.
CEO/Founder Eureka Software Solutions, Inc.

EXPERT WITNESS AND LEGAL CONSULTANT

Contact Information

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512.459.9292 Office
512.459.6244 Fax
www.eurekasoft.com

About Eureka Software

- Custom software development company founded in 1986.
- Client list includes Global 1000 and Fortune 500 companies covering a wide range of industries from transportation and energy to manufacturing and healthcare.
- Services cover full spectrum of legacy, current and emerging development platforms.
- Microsoft Certified, and experienced in Java/Open Source and embedded systems, as well as a number of other technologies and applications.
- Profitable and award winning company for more than two decades under Mr. Myers' direction.

Professional Background

- Currently active software industry executive with 30+ years' experience.
- Founder of Eureka Software Solutions, Inc. ("Eureka"). CEO of Eureka for 26 years.
- Involvement in all aspects of the daily management and operation of Eureka, including business development, contracts, customer relations, project scope, execution and oversight, strategy and management, hiring and finance. (See www.eurekasoft.com for additional information)
- Negotiated and performed hundreds of real-world software and technology contracts and statements of work involving complex software project and licensing terms and conditions including material intellectual property aspects.
- Actively engaged in handling and protecting the confidential, proprietary and trade secret information and technology of Eureka and its clients.

Capabilities/Resources

- Equally comfortable in either a consulting or testifying expert role.
- Proficient at giving depositions and offering in-court testimony – hearings and trial.
- Experienced in assisting counsel with the taking and defending of depositions, reviewing and challenging the testimony of others, and preparing and implementing an overall trial strategy.
- Adept at taking highly technical material and effectively communicating it to a judge or laymen in terms they can understand.
- Ready availability of Eureka's experienced team of software developers and IT forensic specialists as needed to analyze or recreate relevant software or hardware platforms or scenarios.
- Direct access to and familiarity with proprietary and licensed tools and software to assist with code analysis and performance testing, load testing, data recovery and extraction, metadata review and management and e-discovery.

Practical Implementations of Expertise

- Review and comparison of software code and functionality in relation to contractual commitments and requirements and/or protected intellectual property including, trade secrets, copyrights and patents.

Personal Information

- Native of Nashville, Tennessee
- Resident of Austin, Texas since 1986
- Bachelor of Science in Engineering, Texas A&M University, Cum Laude
- Substantial graduate level course work at the University of Texas
- Licensed Professional Engineer #75271, State of Texas
- Private Instrument Rated Pilot #3014095

Elite Expert Designation

eliteXpert

Designated as an Elite Expert™ by IMS *ExpertServices*™, the premier subject matter expert search firm in the legal industry, providing customized expert witness search services to more than 90 of the AmLaw 100 and half of the Fortune 100."

- Computer/software forensics – able to reverse engineer and reconstruct hardware and software environments from backups, remnants and fragments of historical software. Eureka IT and Software development team is skilled at re-creating past hardware and software environments.
- Investigation and assessment of software project bidding, planning and performance with particular attention to adequacy of discovery, specifications, cost estimates, schedules and deliverables.
- Functional and performance testing of software against applicable specifications, warranties or industry standards using proprietary and commercial testing tools and techniques.
- Evaluation and use of both traditional and cutting edge software development techniques and strategies, including creative payment structures related to software application/effort valuation and intellectual property licensing and ownership.
- Reviewing and exercising software applications and IT networks to expose and correct security issues and weaknesses

Areas of Expertise

- Computer/Software Trade Secret Misappropriation and Infringement
- Software Intellectual Property (i.e. copyright, patents, trade secrets, derivative works)
- Computer/Software Forensics and Data Recovery
- Computer Software/ Programming
- Software Project Failure
- Computer/Software Technology & Strategy Mapping
- Software Testing
- Software Analysis & Development
- Software/Computer Contracts and Licenses
- Software Quality Analysis
- Software Project Estimating
- Software Schedule Delay & Analysis
- Software Outsourcing
- Computer Engineering Software
- Software Source Code – Comparison and Analysis
- Computer/Software Patent Claim Charting and Review
- New Computer/Software Product Development and Investigation
- Software Project Statement of Work and Specification Review
- Software Product Economic Life
- Information Technology Practices and Standards
- E-discovery
- Electronic Due Diligence
- Software Proposals
- Software Development Methodologies and Standards
- Cyberspace/Internet Commerce and Security
- Dispute Resolutions
- Internet & Web Strategies
- Software Application Valuation & Appraisals
- Software Security
- Software Consultant Errors & Omissions
- Revenue Recognition Models

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Examples of Cases and Engagements

Litigation Matters

- *Evolutionary Intelligence, LLC v. Apple, Inc.,* Consulting and testifying expert for the Defendant in software patent infringement case in Texas federal court.

- *American Airlines, Inc. v. Sabre Inc., Sabre Holdings, Inc., and Sabre Travel International Ltd.* - Consulting and testifying expert in a high profile state court antitrust matter within the air travel industry involving travel-shopping technologies for airfare and optional services.

- *American Airlines, Inc. v. Travelport Limited and Travelport, LP* - Consulting and testifying expert in a high profile federal court antitrust matter within the air travel industry involving travel shopping technologies for airfare and optional services.

- *Intellectual Ventures I LLC et.al. v. Symantec Corp.* Consulting and testifying expert in software patent infringement case in Delaware Federal Court.

- *DDB Technologies LLC v. Yahoo! Inc.* – Consulting and testifying expert for Defendants in Federal Court case involving alleged infringement of involving live sporting event broadcasting technology.

- *JurisDictionUSA, Inc. v. Loislaw.com, Inc. and Aspen Publishers, Inc., et.al.* - Consulting and testifying expert on significant state court case involving historical reconstruction and testing of legal software product and analysis and testimony concerning the performance of such software product against contract specifications.

- *Planview, Inc. v. Computer Associates International Inc.* - Consulting and testifying expert on state court case involving misappropriation of software trade secrets by key personnel and the comparison of each party's complex proprietary software systems in order to determine if misappropriation occurred. Case resulted in one of the largest monetary settlements of its kind in Texas in favor of our client.

- *Jatin Suryawanshi, Partha Sarkar, and Sanjay Girdhar v. UBS AG and UBS Securities LLC* – Consulting and testifying expert in FINRA Arbitration involving alleged misappropriation of trade secret, software, comparison and analysis of each party's complex financial/trading software systems, and forensic review of computer hardware systems to determine access to and existence and transfer of trade secrets.

- *General Parts, Inc. (Carquest Auto Parts) v. Internet AutoParts, Inc.* – Consulting and testifying expert in federal court case involving comparison and analysis of software products against contract requirements and specification.

- *Chevron USA, Inc. v. Qiang Zhou and Maxwell Dynamics, Inc.* – Consulting and testifying expert for plaintiff in case alleging misappropriation of trade secrets and breach of employment agreement. Federal district court case involving advanced oil and gas industry software and technology. Assisted in successfully seeking preliminary relief and early-agreed resolution.

- *Scienton Technologies, Inc. et.al. v. Computer Associates International, Inc.* – Consulting and testifying expert for plaintiffs in case involving dispute between former joint development partners over alleged misappropriation of trade secrets and know-how and breach of collaboration and confidentiality agreements. Federal district court case involving Sharepoint and enterprise data storage solutions.

- *International Business Machines Corporation v. BGC partners, Inc. et al.* – Consulting and testifying expert for defendants in software licensing case in Federal District Court in New York.

- *Touchcom, Inc., et.al. v. Bereskin & Parr, et.al.* – Consulting expert for defendants on means plus function software patent infringement case embedded within legal malpractice case. Federal district court case involving oil and gas related technology.

- *Charles Moon and AISoft, Inc. v. Infoglide Corporation.* - Consulting and testifying expert on state court case involving retention of trade secrets and other intellectual property rights by key employees and forensic and comparative determination of whether such employees brought the trade secrets and intellectual property to their subsequent employer.

- *e-BackgroundChecks.com, Inc. v. Deverus, Inc.* – Consulting and testifying expert on state court case with focus on determining whether software trade secrets misappropriated by employee had been integrated into subsequent employer's competitive software product.

- *Universal Background Screening, Inc. v. Deverus, Inc.* - Consulting and testifying expert on state court case with focus on determining whether software trade secrets misappropriated by employee had been integrated into subsequent employer's competitive software product.

- *Avepoint, Inc. v. Janalent Corporation* – Consulting and testifying expert in federal court case (District of New Jersey) involving misappropriation of trade secrets and breach of contract related to enterprise document management software.

- *Lewis and Clark Outdoors, Inc. v. L.C. Industries, Inc.* – Consulting and testifying expert on state court case involving infringement/theft of trademark and trade dress.

- *2-Wire, Inc.* - Consulting expert related to review and analysis of product economic life for large telecommunications equipment manufacture for use in creating revenue recognition model complying with generally accepted accounting principles.

- *Epic Merchant Management, Inc., et.al. v. West Oaks Energy, LP, et.al* – Consulting and testifying expert for plaintiff/employer in case involving alleged misappropriation of software trade secrets, breach of employment contract, breach of fiduciary duty and fraud. Texas state court case involving proprietary energy trading systems software.

- *SFA Systems, LLC v. Bigmachines, et al* - Consulting and testifying expert for Plaintiff in case involving infringement of patent related to sales force automation systems and software.

- *SFA Systems, LLC v. 1-800-Flowers.com, Inc., et al.* - Consulting and testifying expert for Plaintiff in case involving infringement of patent related to sales force automation systems and software.

Testimonials

"Monty Myers was a key witness in a recent complex case involving a software development project. His reconstruction of previous versions of the software was critical for the jury's understanding of our case. Monty is an excellent communicator and has the unique ability to explain advanced technical issues in simple terms that jurors understand. He is professional; a true expert in his field, and his company's success is only one example of his impeccable credentials. The major reason for our success at trial was due to Monty Myers' testimony."

Joe McKay
Friday, Eldridge & Clark, LLP
Little Rock, Arkansas

"Monty Myers and his team have been a key factor in my successful litigation of trade secrets cases. Monty is not only knowledgeable about the highly technical aspects of software development and forensic analysis, but he also has a firm grasp of the business processes involved. Likewise, he communicates like a businessperson – so his testimony is clear and understandable and even enjoyable because we're all learning from him and his colleagues. One of my favorite aspects of working with Monty's team is that they delve deep enough, early enough, to help craft the parameters of the dispute. In other words, they know when to say no, and when they say yes, it's with a firm foundation."

Karen Burgess
Taylor, Dunham and Burgess
Austin, Texas

I was very pleased with Eureka's work and the zeal they brought to the task at hand, and would be pleased to speak with others who are contemplating engaging Eureka's services should they call.

Werner A. Powers
Haynes and Boone, LLP
Dallas, Texas

Testimonials

"I felt equally comfortable bringing Monty Myers and his team into the areas requiring heavy technical lifting in the maintenance and improvement of our core firmware and overall product management system as I did in asking him to work with and analyze our financial data and issues related to product economic life and revenue recognition."

Damien Leostic
2Wire, Inc
San Jose, California

- *CAM Technologies, Inc. and CAM Technologies IP Holdings, LLC v. Compressed Air Network, Ltd. et al.* – Consulting expert in software copyright infringement and trade secret misappropriation case in Federal District Court in Maryland.
- *Phoenix Licensing, LLC et al. United National Corporation, First Premier Bank, and Premier Bankcard, LLC et al.* – Consulting and testifying expert for Defendants in US District Court, Eastern District of Texas case involving alleged banking software patent infringement.
- *Quadrus Corp v. Criley and Cohesion Force, Inc.* – Consulting expert for plaintiff in copyright infringement and trade secret misappropriation case involving software for tracking xml data traffic related to the defense industry.
- *Bridgetree, Inc. et al. v Red F Marketing LLC et al.* – Consulting and testifying expert for Defendants in Federal Court case involving alleged misappropriation of software trade secrets and copyright infringement.
- *TravelFocus, LLC v. World Ventures, LLC* - Consulting and testifying expert engagement involving alleged misappropriation of travel shopping software trade secrets and the comparison of each party's complex proprietary software systems.
- *Herbert and Marlene Singer Living Trust, et.al. v. The Travelers Lloyds Insurance Company and First Texas Insurance Services, LC* – Consulting and Co-Defendant Travelers over existence of e-mail communication. Provided in-depth forensic inquiry into each party's primary and back-up IT systems to determine whether e-mail was sent and/or received.
- *My485, Inc. v. Riverside Partners, LLC et al.* – Consulting and Testifying expert for Defendants in Texas State Court case involving alleged misappropriation of trade secrets related to healthcare and medical record related software.
- *Pulsepoint, Inc. and UnsubCentral, Inc. v. Optizmo Technologies, LLC* – Consulting and testifying expert witness in Texas state court case involving alleged misappropriation of software trade secrets.
- *Anue Systems, Inc. v. Sameer Gupta and Giganet Systems, Inc.* - Consulting and testifying expert for Plaintiff in Texas State Court case involving alleged misappropriation of trade secrets related to network switching and security technology
- *MSCI Inc. et al v. Philip Jacob, Axioma, Inc. et al.* – Consulting and testifying expert for Defendants in New York Supreme Court case involving alleged misappropriation of trade secrets related to multi-asset investment portfolio risk management software.
- *Kenneth C. Henry v. Petrolink Services, Inc. v. Digital Well File, LLC* – Consulting and testifying expert in Texas State Court case involving petroleum data management software.
- *Travel Syndication Technology, LLC v. Fuzebox, LLC and Digital Commerce, LLC* – Consulting and testifying expert in Delaware Federal Court case involving technology/software contract performance and intellectual property ownership and misappropriation.
- *Variant Holdings, LLC and Variant, Inc. v. TravelClick, Inc.*, Consulting and testifying expert for Defendant in Texas Federal Court case involving

infringement of software patents covering emote kiosk marketing in the travel industry.

- *First Bank & Trust v. Gulf Coast Bank & Trust et.al.,* Consulting and testifying expert for Defendants in case involving misappropriation of trade secrets in banking software in Louisiana Federal Court.

- *Macro Niche Software, Inc. et.al. v. 4 Imaging Solutions, LLC et.al.,* Consulting and testifying expert for Defendants in Texas Federal Court case involving copyright infringement related to medical device management software

- *Vertical Computer Systems, Inc. v. LG Electronics Mobilecomm U.S.A., Inc. et.al.,* Consulting expert for Defendant in Texas Federal Court case involving alleged patent infringement.

- Special master and advisor to arbitration panel and parties in a software trade secret arbitration under the large and complex case rules of the American Arbitration Association.

- Consulting expert in several additional patent infringement cases involving the analysis and charting of complex patent claims and the assessment of whether a product or process infringes such claims, including for a major broadcast media conglomerate.

EXHIBIT B

Content Only

The Object

```
copyrightnotice^copyright.txt^file
```

Logic

This object obtains the content of the copyright notice only without any function or form.

copyright.txt (content)

The information contained herein is protected by the copyright laws of the United States. The copyright laws prohibit any copying, redistributing, retransmitting, broadcasting or repurposing of any copyright-protected material.

Generated Output

The information contained herein is protected by the copyright laws of the United States. The copyright laws prohibit any copying, redistributing, retransmitting, broadcasting or repurposing of any copyright-protected material.

Form Only

The Object

```
makespace^makespace.html^file
```

Logic

This object simply adds form only space in the formatting of a page without any content or functionality.

makespace.html (form)

```
<BR>
```

Generated Output

```
<BR>
```

Function Only

The Object

```
mouseoverswap^mouseoverswap.html^file
```

Logic

The object defines functionality that allows images to change colors when the mouse is moved over them. It contains no form information and no content.

mouseoverswap.html

```
  <script language="JavaScript">

<!--
```

```
function MM_preloadImages() { //v1.2
  if (document.images) {
    var imgFiles = MM_preloadImages.arguments;
    var preloadArray = new Array();
    for (var i=0; i<imgFiles.length; i++) {
      preloadArray[i] = new Image;
      preloadArray[i].src = imgFiles[i];
    }
  }
}
function MM_swapImage() { //v1.2
  var i,j=0,objStr,obj,swapArray=new Array,oldArray=document.MM_swapImgData;
  for (i=0; i < (MM_swapImage.arguments.length-2); i+=3) {
    objStr = MM_swapImage.arguments[(navigator.appName == 'Netscape')?i:i+1];
    if ((objStr.indexOf('document.layers[')==0 && document.layers==null) ||
        (objStr.indexOf('document.all[')   ==0 && document.all   ==null))
      objStr = 'document'+objStr.substring(objStr.lastIndexOf('.'),objStr.length);
    obj = eval(objStr);
    if (obj != null) {
      swapArray[j++] = obj;
      swapArray[j++] = (oldArray==null || oldArray[j-1]!=obj)?obj.src:oldArray[j];
      obj.src = MM_swapImage.arguments[i+2];
  } }
  document.MM_swapImgData = swapArray; //used for restore
}
//-->
</script>
```

Generated Output

```
  <script language="JavaScript">
```

```
<!--
function MM_preloadImages() { //v1.2
  if (document.images) {
    var imgFiles = MM_preloadImages.arguments;
    var preloadArray = new Array();
    for (var i=0; i<imgFiles.length; i++) {
      preloadArray[i] = new Image;
      preloadArray[i].src = imgFiles[i];
    }
  }
}
function MM_swapImage() { //v1.2
  var i,j=0,objStr,obj,swapArray=new Array,oldArray=document.MM_swapImgData;
  for (i=0; i < (MM_swapImage.arguments.length-2); i+=3) {
    objStr = MM_swapImage.arguments[(navigator.appName == 'Netscape')?i:i+1];
    if ((objStr.indexOf('document.layers[')==0 && document.layers==null) ||
        (objStr.indexOf('document.all[')   ==0 && document.all   ==null))
      objStr = 'document'+objStr.substring(objStr.lastIndexOf('.'),objStr.length);
    obj = eval(objStr);
    if (obj != null) {
      swapArray[j++] = obj;
      swapArray[j++] = (oldArray==null || oldArray[j-1]!=obj)?obj.src:oldArray[j];
      obj.src = MM_swapImage.arguments[i+2];
  } }
  document.MM_swapImgData = swapArray; //used for restore
}
//-->
</script>
```

Form and function

The Object

```
weathericonselector^weathericonselector.html^file
```

Logic

In order to only display the weather in the most appropriate spot, we have an object responsible for deciding on the form and function of the navigation bar. Before 9am, the weather icon will show up at the top of the list. After 9am, it shows up in its normal position further down the navigation bar. This object demonstrates functionality based on the time of day to change the form of the document.

weathericonselector.html (function)

```
#moveableicon#

<script type="text/javascript">

function weathericonselector(){

        var now = new Date();

        var hour = now.getHours();

        var weathericon = document.getElementById('weathericon');

        weathericon.appendChild(document.getElementById('moveableicon'));

        if(hour < 9)

        {

                document.getElementById("nav-slot-1").appendChild(weathericon);

        } else {

                document.getElementById("nav-slot-9").appendChild(weathericon);

        }

};

</script>
```

moveableicon object

```
moveableicon^moveableicon.html^file
```

moveableicon.html (form)

```
<td id="weathericon"></td>
```

Generated output

```
<td id="weathericon"></td>

<script type="text/javascript">
```

```
function weathericonselector(){
    var now = new Date();
    var hour = now.getHours();
    var weathericon = document.getElementById('weathericon');
    weathericon.appendChild(document.getElementById('moveableicon'));
    if(hour < 9)
    {
        document.getElementById("nav-slot-1").appendChild(weathericon);
    } else {
        document.getElementById("nav-slot-9").appendChild(weathericon);
    }
};
</script>
```

Form and content

The Object

emaillink^emailus.html^file

Logic

This object offers separate form (emailus.html) and content (emaillink.txt) without any functionality.

emailus.html (form)

```
<a href="/NF/omf/eagle/contact.html"><font
color="#FFFFFF">#emaillinktext#</font></a>
```

emaillinktext object

```
emaillinktext^emaillink.txt^file
```

emaillink.txt (content)

```
Email us!
```

Generated Output

```
<a href="/NF/omf/eagle/contact.html"><font color="#FFFFFF">Email us!</font></a>
```

Function and content

The Object

```
logoselector^bash /local1/web/htdocs/eagle/logoselector.sh^cgi
```

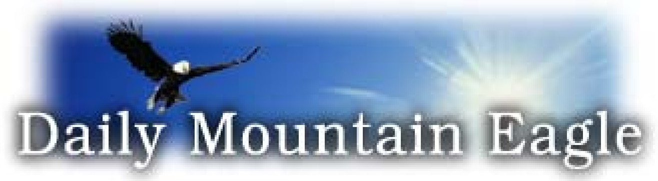
Logic

This object generates a random colored information for display on at the top of the page. The functionality is the random selection of which image to display, and the separate content is the image itself.

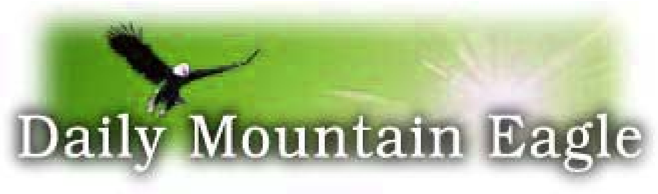
logoselector.sh (function)

```
#!/bin/bash

if [ $((RANDOM%2)) -eq 1 ]; then echo "/images/mast96.jpg"; else echo
"/images/altlogo.jpg"; fi
```

mast96.jpg (content)



altlogo.jpg (content)



Generated Output (example 1)

```
/images/mast96.jpg
```

Generated Output (example 2)

```
/images/altlogo.jpg
```

Form, function, and content

The Object

```
logodisplay^logodisplay.html^file
```

Logic

This object positions an image container in the center of the screen and sets its width and height, so it contains form. It determines which logo to display by randomly selecting one, which is the function. The content is the image itself. The form can be managed in logodisplay.html, the function in logoselector.sh, and the images in their respective files.

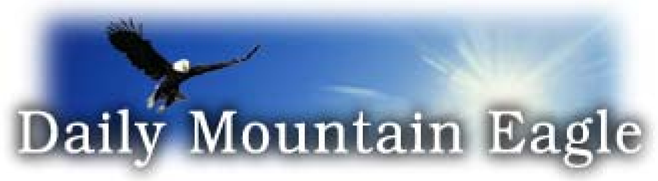
logodisplay.html (form)

```
<td width="496" valign="middle" align="center"><img src="#logoselector#" width="332"
height="96"></td>
```

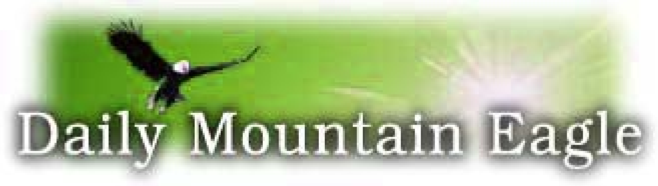
logoselector.sh (function)

```
#!/bin/bash

if [ $((RANDOM%2)) -eq 1 ]; then echo "/images/mast96.jpg"; else echo
"/images/altlogo.jpg"; fi
```

mast96.jpg (content)



altlogo.jpg (content)



Generated Output (example 1)

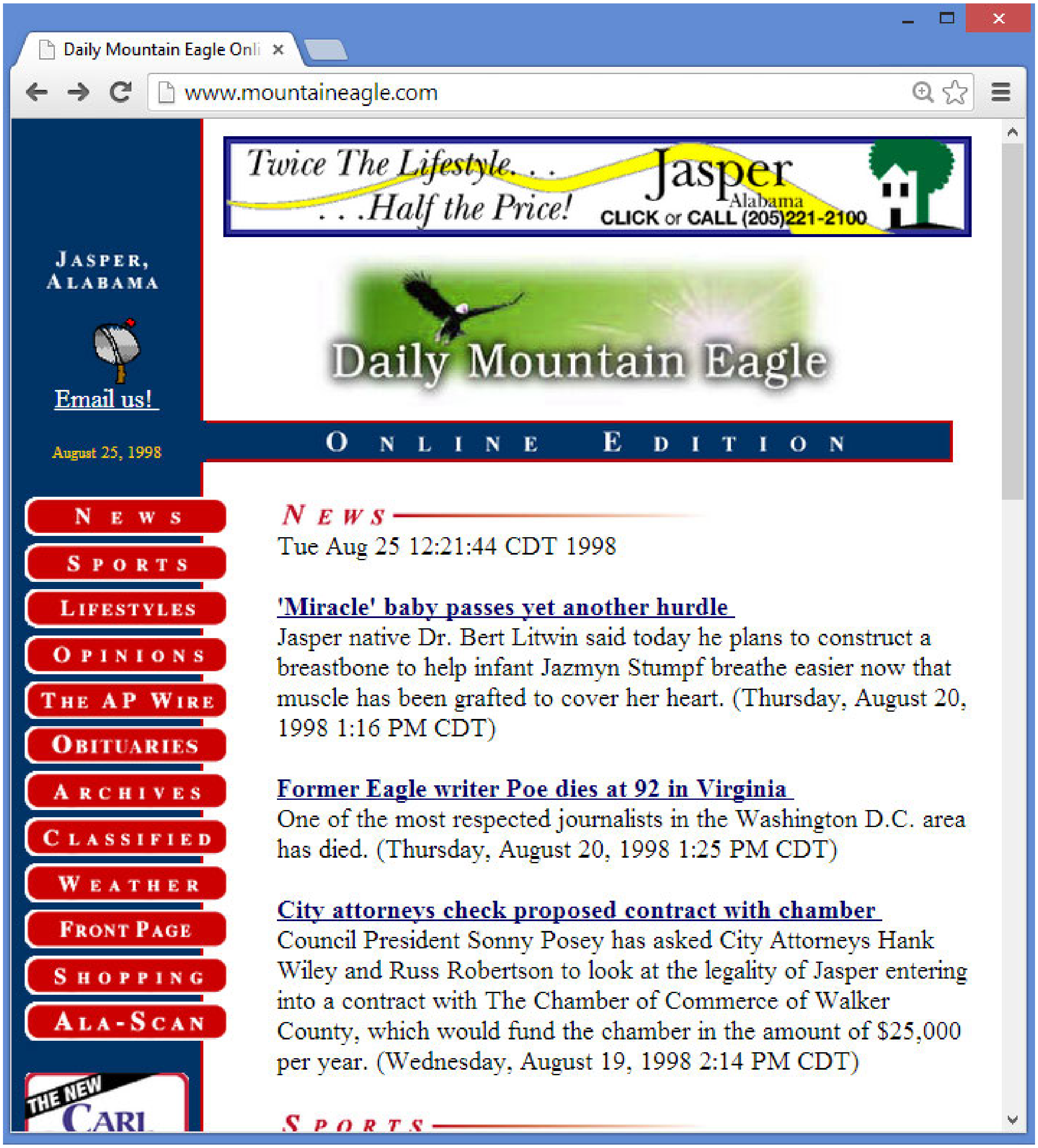
```
<td width="496" valign="middle" align="center"><img src="/images/altlogo.jpg"
width="332" height="96"></td>
```

Generated Output (example 2)

```
<td width="496" valign="middle" align="center"><img src="/images/mast96.jpg"
width="332" height="96"></td>
```

Finished Page

Using all of the objects described above, the WebOS OMF engine from August of 1998 generates the following complete Web page for the Walls Media Web site for the Jasper Daily Mountain Eagle including actual news stories from 1998.



News

Tue Aug 25 12:21:44 CDT 1998

'Miracle' baby passes yet another hurdle

Jasper native Dr. Bert Litwin said today he plans to construct a breastbone to help infant Jazmyn Stumpf breathe easier now that muscle has been grafted to cover her heart. (Thursday, August 20, 1998 1:16 PM CDT)

Former Eagle writer Poe dies at 92 in Virginia

One of the most respected journalists in the Washington D.C. area has died. (Thursday, August 20, 1998 1:25 PM CDT)

City attorneys check proposed contract with chamber

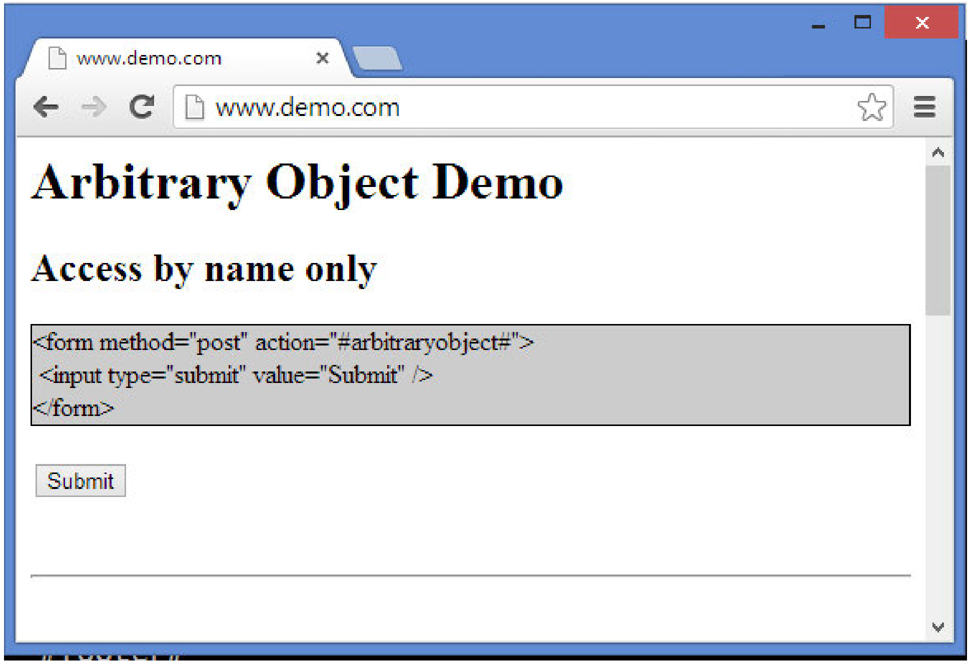
Council President Sonny Posey has asked City Attorneys Hank Wiley and Russ Robertson to look at the legality of Jasper entering into a contract with The Chamber of Commerce of Walker County, which would fund the chamber in the amount of $25,000 per year. (Wednesday, August 19, 1998 2:14 PM CDT)

Sports

EXHIBIT C

Arbitrary Object Demo

Access by name only; rendered html

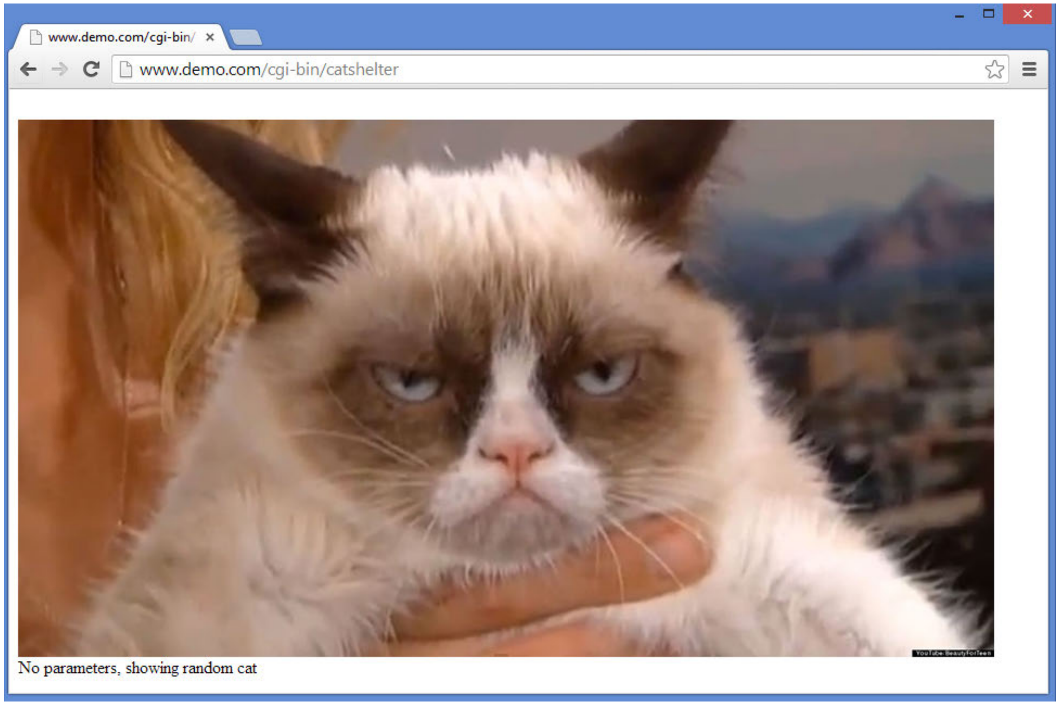


Arbitrary Object Demo

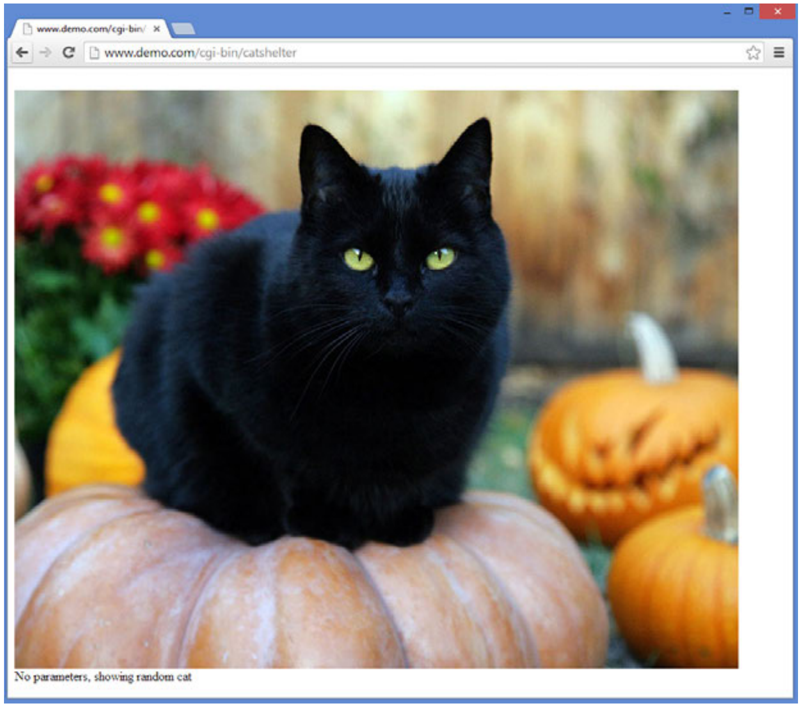
Access by name only

```
<form method="post" action="#arbitraryobject#">
 <input type="submit" value="Submit" />
</form>
```

Access by name only – after click (2 examples)

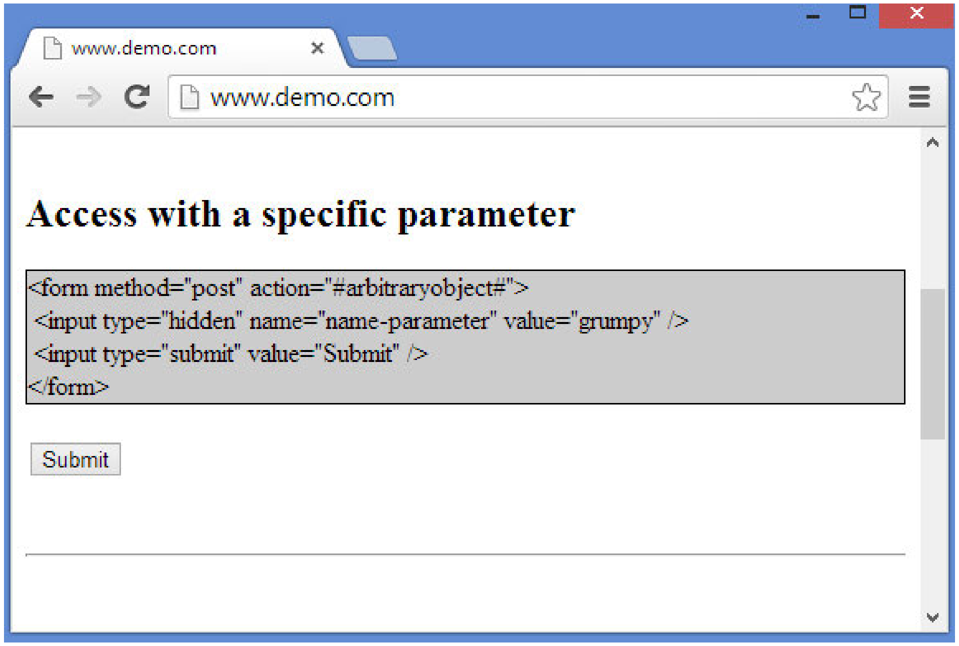


No parameters, showing random cat



No parameters, showing random cat

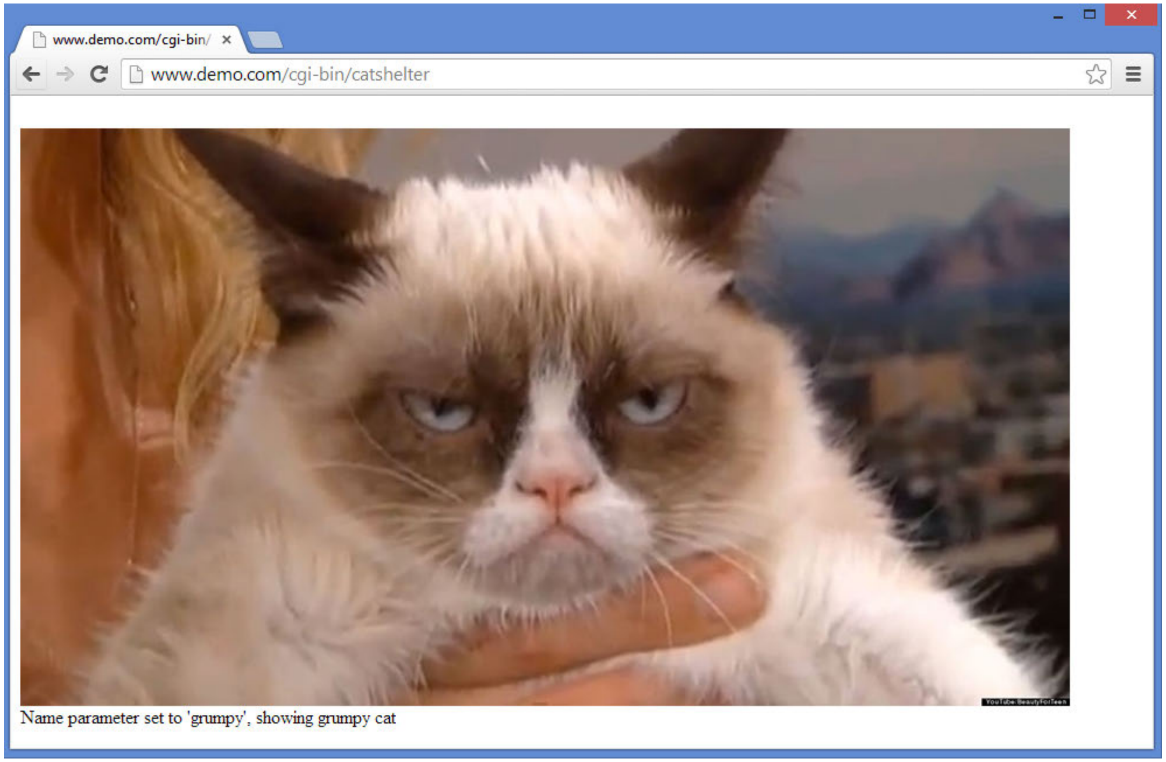
Access with a specific parameter; rendered html



Access with a specific parameter

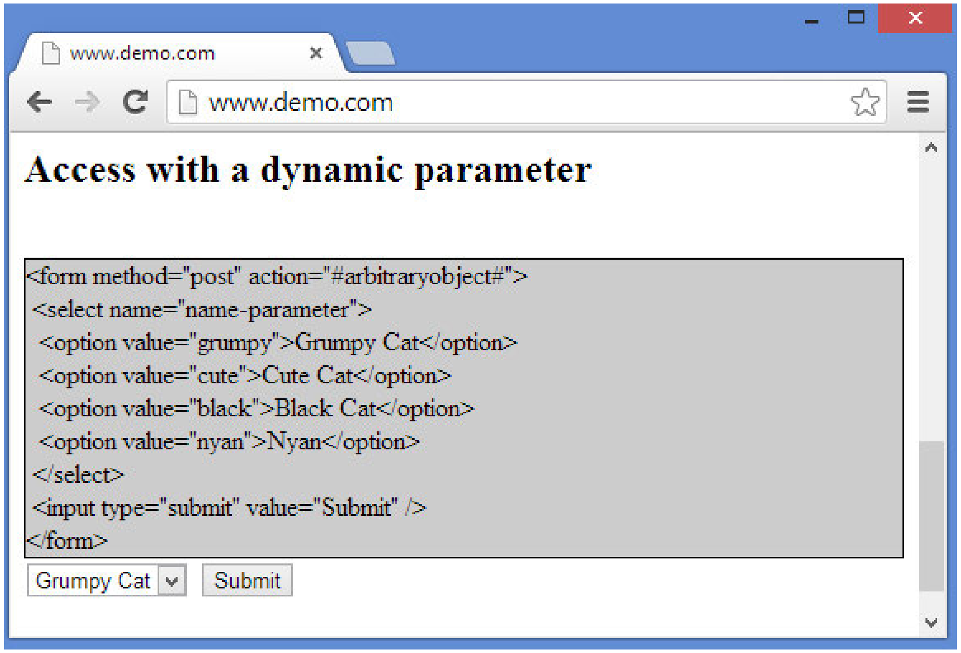
```
<form method="post" action="#arbitraryobject#">
 <input type="hidden" name="name-parameter" value="grumpy" />
 <input type="submit" value="Submit" />
</form>
```

Access with a specific parameter; after click



Name parameter set to 'grumpy', showing grumpy cat

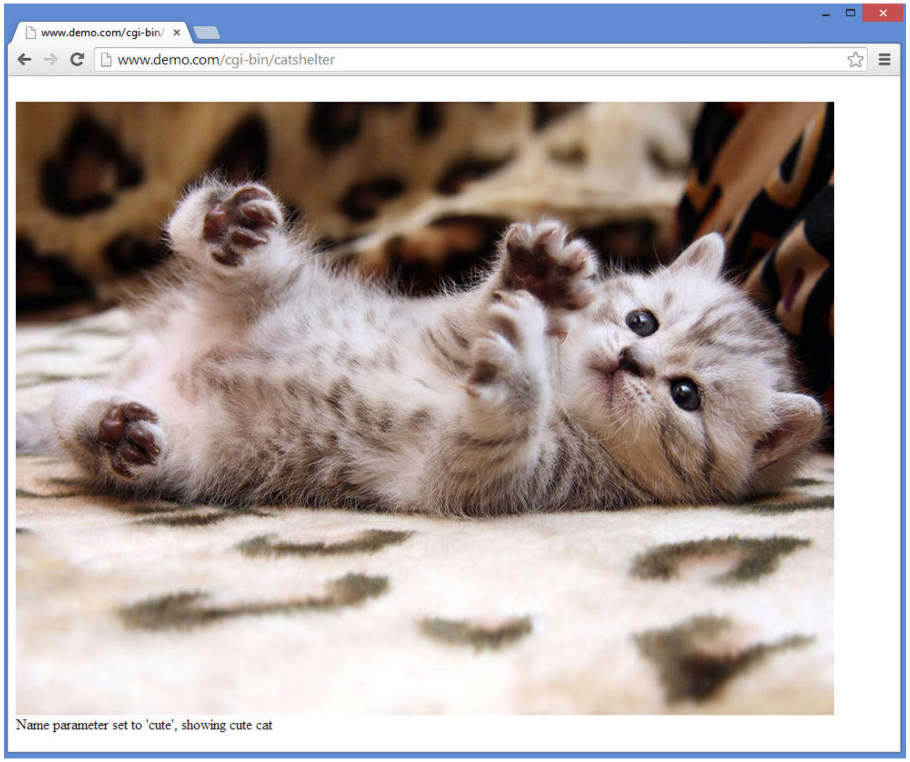
Access with a dynamic parameter; rendered html



Access with a dynamic parameter

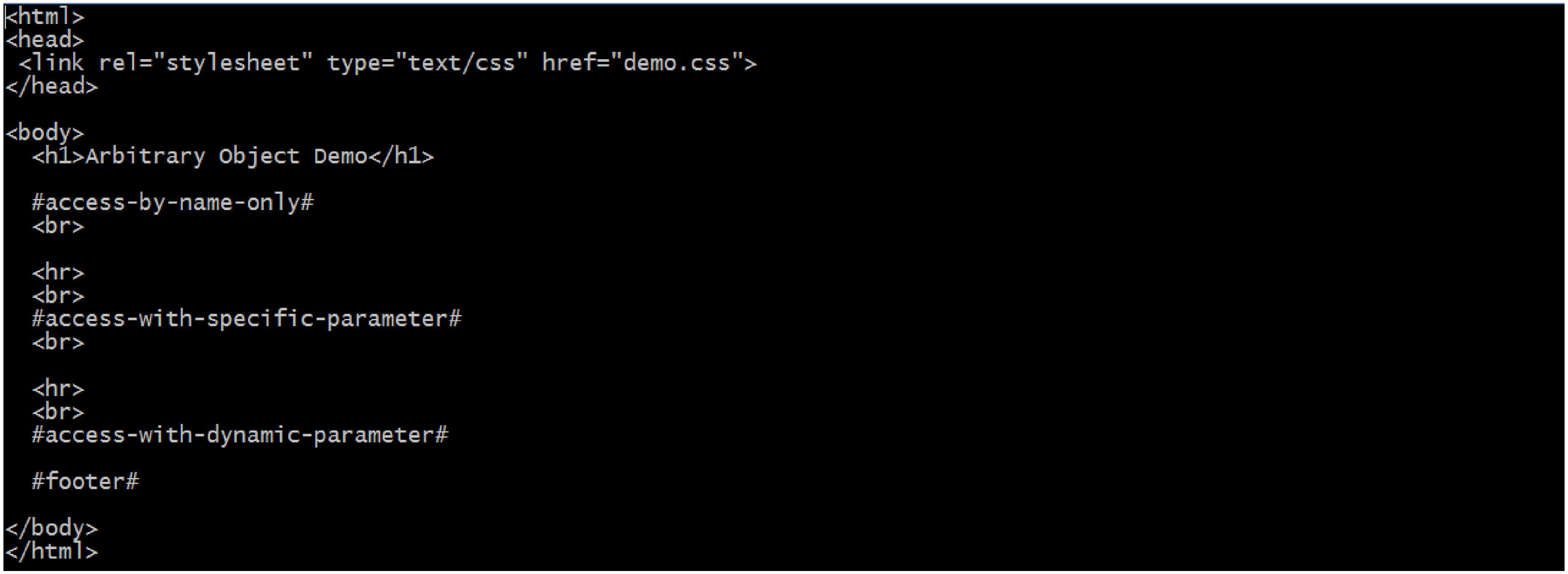
```
<form method="post" action="#arbitraryobject#">
 <select name="name-parameter">
  <option value="grumpy">Grumpy Cat</option>
  <option value="cute">Cute Cat</option>
  <option value="black">Black Cat</option>
  <option value="nyan">Nyan</option>
 </select>
 <input type="submit" value="Submit" />
</form>
```

Access with a dynamic parameter; after click with "Cute Cat" selected



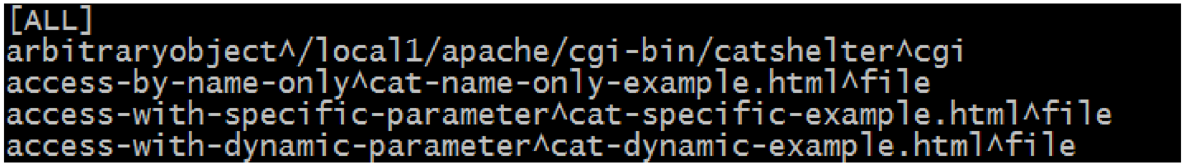
Name parameter set to 'cute', showing cute cat

Full server-side template



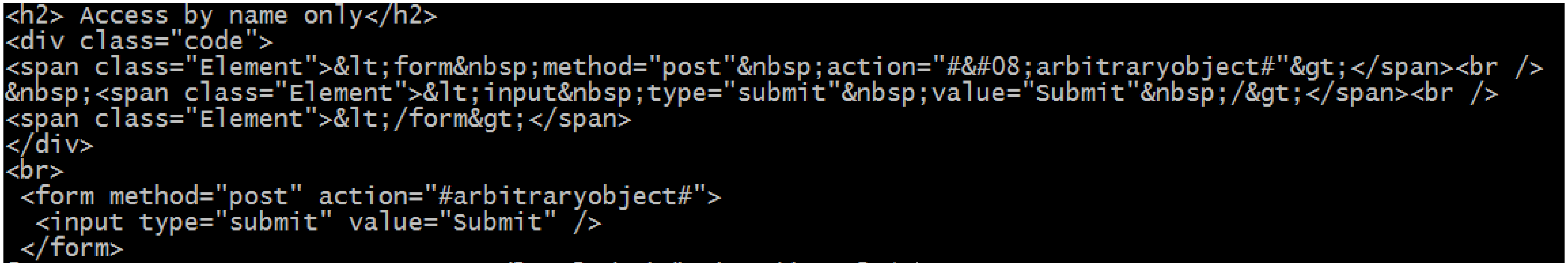
```
<html>
<head>
 <link rel="stylesheet" type="text/css" href="demo.css">
</head>

<body>
  <h1>Arbitrary Object Demo</h1>

  #access-by-name-only#
  <br>

  <hr>
  <br>
  #access-with-specific-parameter#
  <br>

  <hr>
  <br>
  #access-with-dynamic-parameter#

  #footer#

</body>
</html>
```

object_library.lib



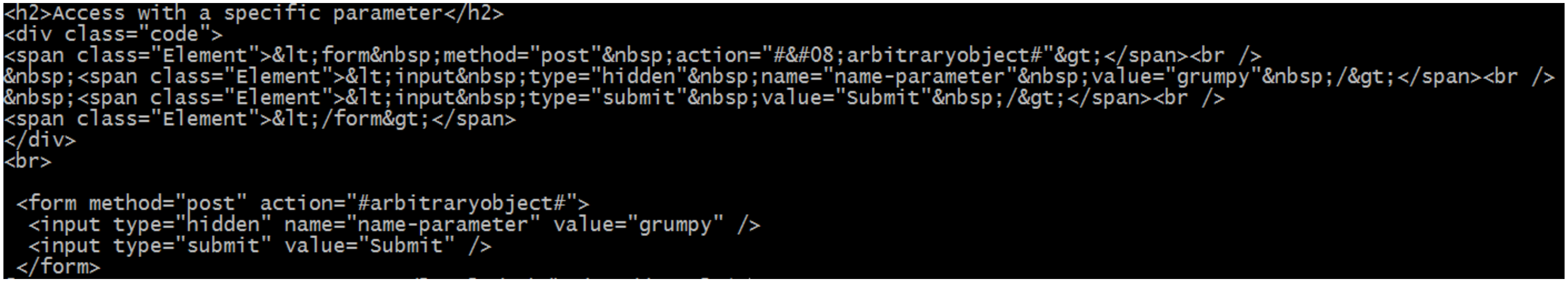
```
[ALL]
arbitraryobject^/local1/apache/cgi-bin/catshelter^cgi
access-by-name-only^cat-name-only-example.html^file
access-with-specific-parameter^cat-specific-example.html^file
access-with-dynamic-parameter^cat-dynamic-example.html^file
```

cat-name-only-example.html



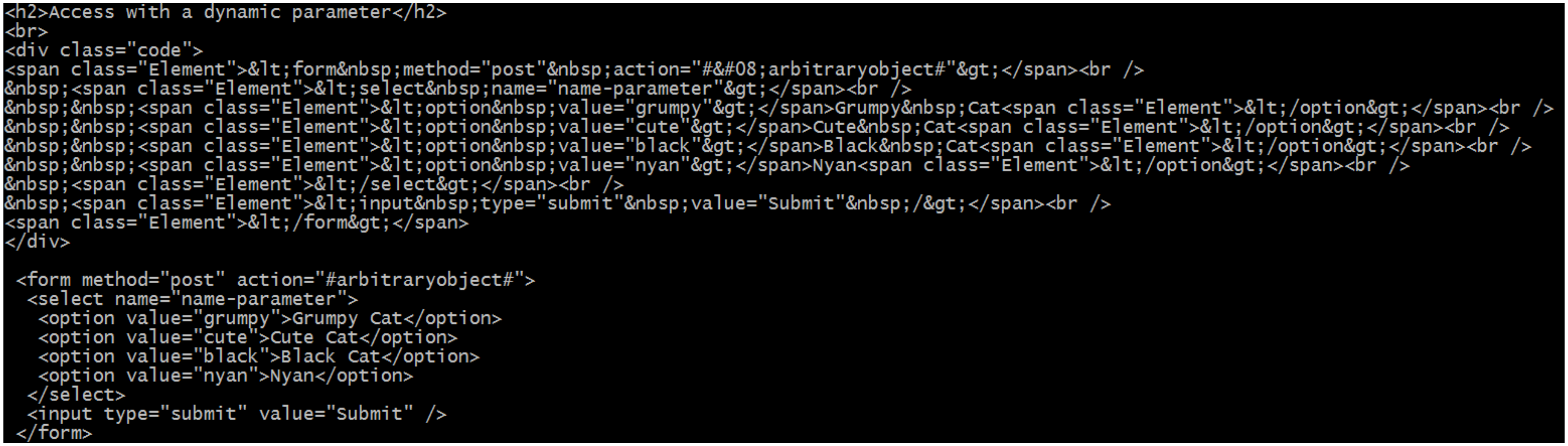
```
<h2> Access by name only</h2>
<div class="code">
<span class="Element">&lt;form&nbsp;method="post"&nbsp;action="#&#08;arbitraryobject#"&gt;</span><br />
&nbsp;<span class="Element">&lt;input&nbsp;type="submit"&nbsp;value="Submit"&nbsp;/&gt;</span><br />
<span class="Element">&lt;/form&gt;</span>
</div>
<br>
 <form method="post" action="#arbitraryobject#">
  <input type="submit" value="Submit" />
 </form>
```

cat-specific-example.html



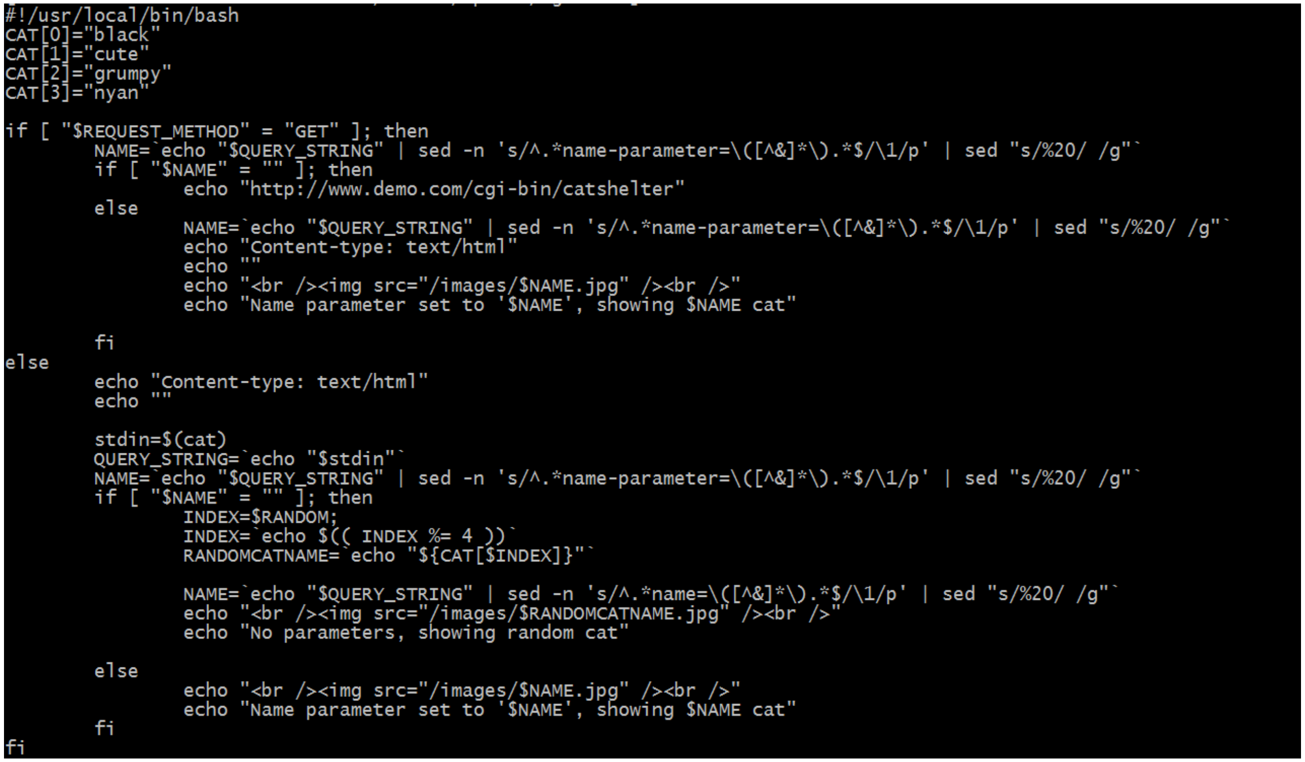
```
<h2>Access with a specific parameter</h2>
<div class="code">
<span class="Element">&lt;form&nbsp;method="post"&nbsp;action="#&#08;arbitraryobject#"&gt;</span><br />
&nbsp;<span class="Element">&lt;input&nbsp;type="hidden"&nbsp;name="name-parameter"&nbsp;value="grumpy"&nbsp;/&gt;</span><br />
&nbsp;<span class="Element">&lt;input&nbsp;type="submit"&nbsp;value="Submit"&nbsp;/&gt;</span><br />
<span class="Element">&lt;/form&gt;</span>
</div>
<br>

 <form method="post" action="#arbitraryobject#">
  <input type="hidden" name="name-parameter" value="grumpy" />
  <input type="submit" value="Submit" />
 </form>
```

cat-dynamic-example.html



```
<h2>Access with a dynamic parameter</h2>
<br>
<div class="code">
<span class="Element">&lt;form&nbsp;method="post"&nbsp;action="#&#08;arbitraryobject#"&gt;</span><br />
&nbsp;<span class="Element">&lt;select&nbsp;name="name-parameter"&gt;</span><br />
&nbsp;&nbsp;<span class="Element">&lt;option&nbsp;value="grumpy"&gt;</span>Grumpy&nbsp;Cat<span class="Element">&lt;/option&gt;</span><br />
&nbsp;&nbsp;<span class="Element">&lt;option&nbsp;value="cute"&gt;</span>Cute&nbsp;Cat<span class="Element">&lt;/option&gt;</span><br />
&nbsp;&nbsp;<span class="Element">&lt;option&nbsp;value="black"&gt;</span>Black&nbsp;Cat<span class="Element">&lt;/option&gt;</span><br />
&nbsp;&nbsp;<span class="Element">&lt;option&nbsp;value="nyan"&gt;</span>Nyan<span class="Element">&lt;/option&gt;</span><br />
&nbsp;<span class="Element">&lt;/select&gt;</span><br />
&nbsp;<span class="Element">&lt;input&nbsp;type="submit"&nbsp;value="Submit"&nbsp;/&gt;</span><br />
<span class="Element">&lt;/form&gt;</span>
</div>

 <form method="post" action="#arbitraryobject#">
  <select name="name-parameter">
   <option value="grumpy">Grumpy Cat</option>
   <option value="cute">Cute Cat</option>
   <option value="black">Black Cat</option>
   <option value="nyan">Nyan</option>
  </select>
  <input type="submit" value="Submit" />
 </form>
```

cgi-bin/catshelter

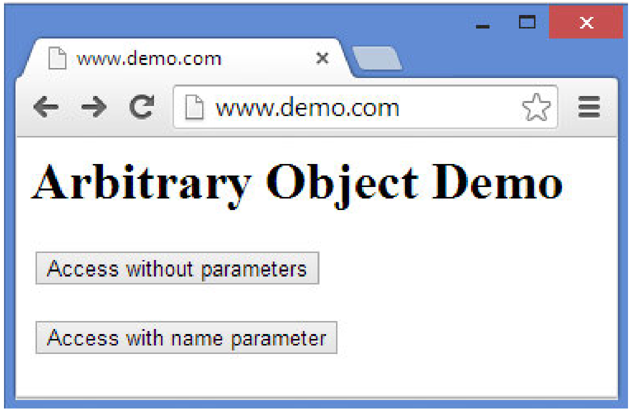


```
#!/usr/local/bin/bash
CAT[0]="black"
CAT[1]="cute"
CAT[2]="grumpy"
CAT[3]="nyan"

if [ "$REQUEST_METHOD" = "GET" ]; then
        NAME=`echo "$QUERY_STRING" | sed -n 's/^.*name-parameter=\([^&]*\).*$/\1/p' | sed "s/%20/ /g"`
        if [ "$NAME" = "" ]; then
                echo "http://www.demo.com/cgi-bin/catshelter"
        else
                NAME=`echo "$QUERY_STRING" | sed -n 's/^.*name-parameter=\([^&]*\).*$/\1/p' | sed "s/%20/ /g"`
                echo "Content-type: text/html"
                echo ""
                echo "<br /><img src="/images/$NAME.jpg" /><br />"
                echo "Name parameter set to '$NAME', showing $NAME cat"

        fi
else
        echo "Content-type: text/html"
        echo ""

        stdin=$(cat)
        QUERY_STRING=`echo "$stdin"`
        NAME=`echo "$QUERY_STRING" | sed -n 's/^.*name-parameter=\([^&]*\).*$/\1/p' | sed "s/%20/ /g"`
        if [ "$NAME" = "" ]; then
                INDEX=$RANDOM;
                INDEX=`echo $(( INDEX %= 4 ))`
                RANDOMCATNAME=`echo "${CAT[$INDEX]}"`

                NAME=`echo "$QUERY_STRING" | sed -n 's/^.*name=\([^&]*\).*$/\1/p' | sed "s/%20/ /g"`
                echo "<br /><img src="/images/$RANDOMCATNAME.jpg" /><br />"
                echo "No parameters, showing random cat"

        else
                echo "<br /><img src="/images/$NAME.jpg" /><br />"
                echo "Name parameter set to '$NAME', showing $NAME cat"
        fi
fi
```

EXHIBIT D

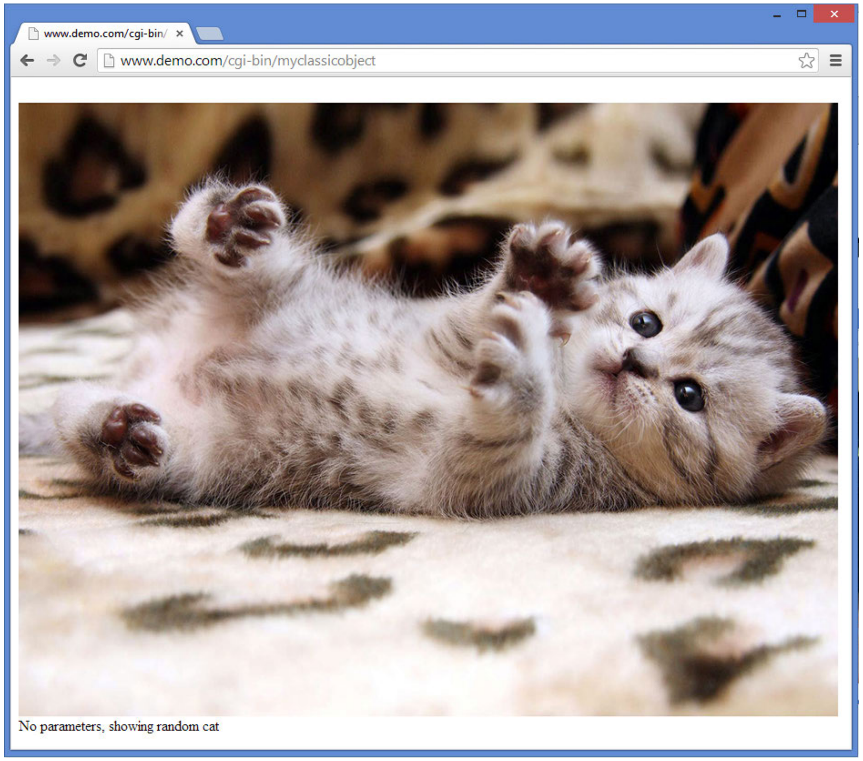
Arbitrary Object Demo

Arbitrary Object Demo Page

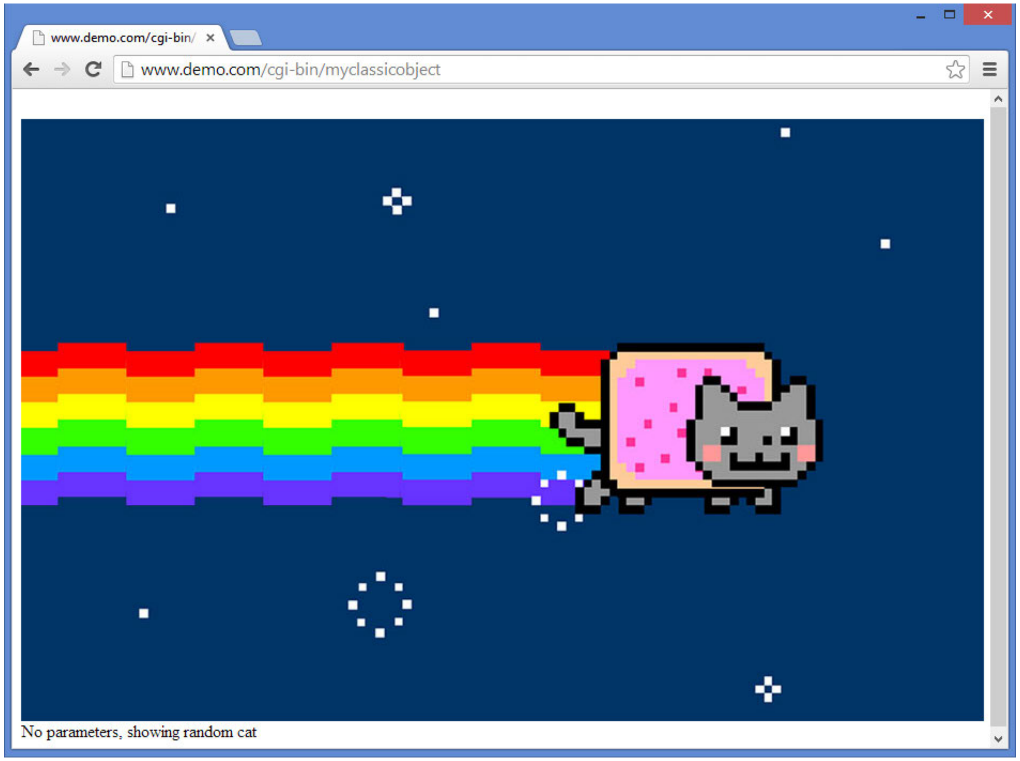


Arbitrary Object Demo

Access without parameters – after click (2 examples)

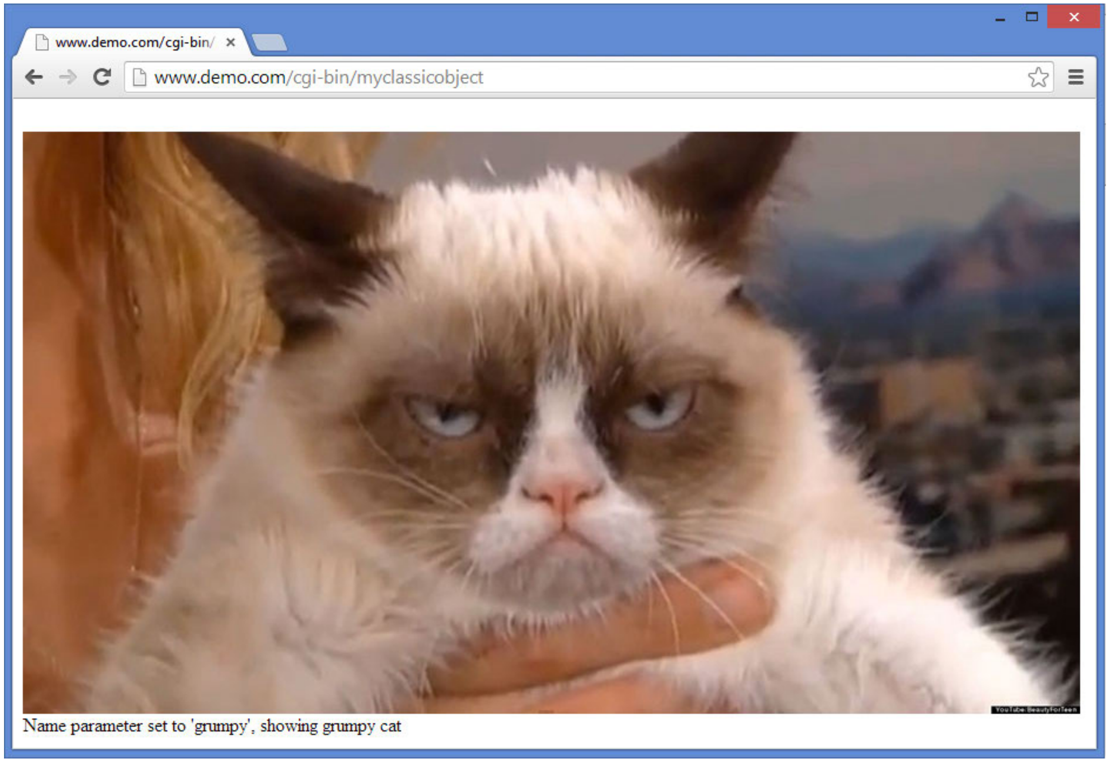


No parameters, showing random cat



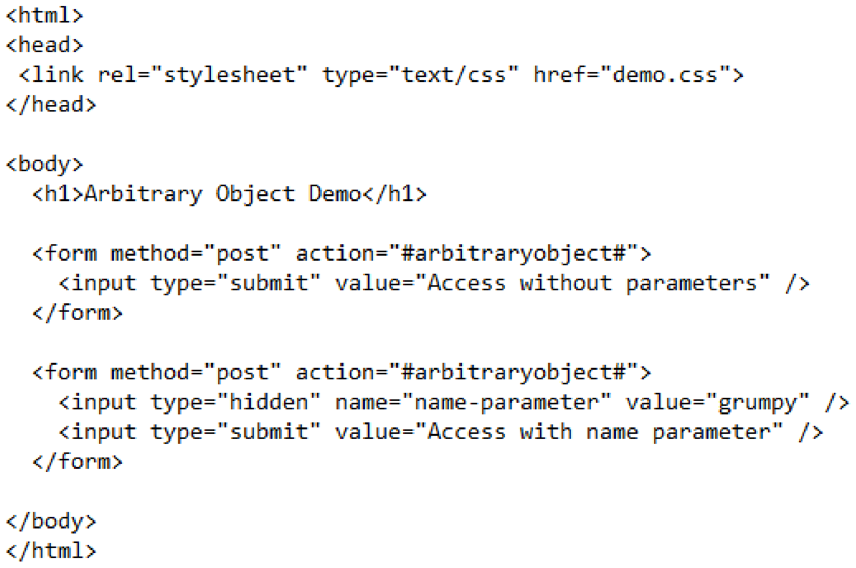
No parameters, showing random cat

Access with a specific parameter; after click



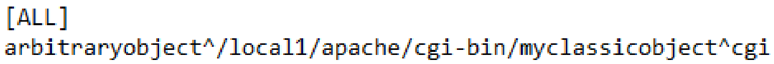
Name parameter set to 'grumpy', showing grumpy cat

Full server-side template



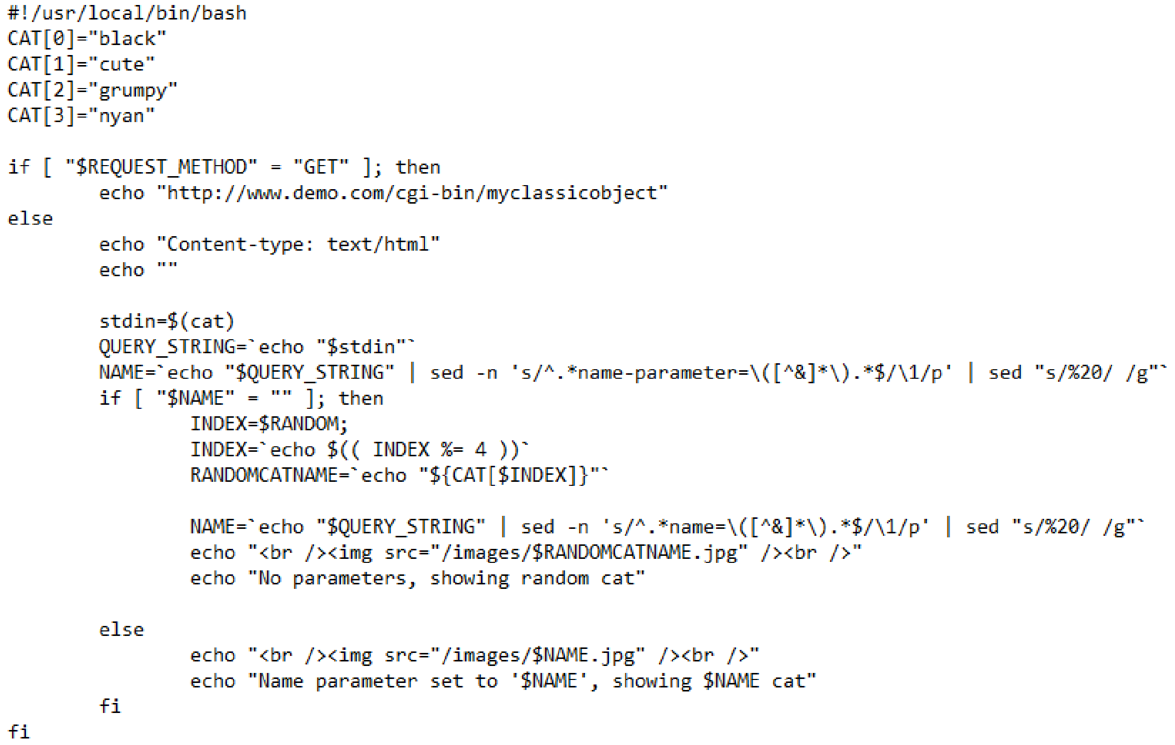
```
<html>
<head>
 <link rel="stylesheet" type="text/css" href="demo.css">
</head>

<body>
  <h1>Arbitrary Object Demo</h1>

  <form method="post" action="#arbitraryobject#">
    <input type="submit" value="Access without parameters" />
  </form>

  <form method="post" action="#arbitraryobject#">
    <input type="hidden" name="name-parameter" value="grumpy" />
    <input type="submit" value="Access with name parameter" />
  </form>

</body>
</html>
```

object_library.lib



```
[ALL]
arbitraryobject^/local1/apache/cgi-bin/myclassicobject^cgi
```

cgi-bin/myclassicobject



```
#!/usr/local/bin/bash
CAT[0]="black"
CAT[1]="cute"
CAT[2]="grumpy"
CAT[3]="nyan"

if [ "$REQUEST_METHOD" = "GET" ]; then
        echo "http://www.demo.com/cgi-bin/myclassicobject"
else
        echo "Content-type: text/html"
        echo ""

        stdin=$(cat)
        QUERY_STRING=`echo "$stdin"`
        NAME=`echo "$QUERY_STRING" | sed -n 's/^.*name-parameter=\([^&]*\).*$/\1/p' | sed "s/%20/ /g"`
        if [ "$NAME" = "" ]; then
                INDEX=$RANDOM;
                INDEX=`echo $(( INDEX %= 4 ))`
                RANDOMCATNAME=`echo "${CAT[$INDEX]}"`

                NAME=`echo "$QUERY_STRING" | sed -n 's/^.*name=\([^&]*\).*$/\1/p' | sed "s/%20/ /g"`
                echo "<br /><img src="/images/$RANDOMCATNAME.jpg" /><br />"
                echo "No parameters, showing random cat"

        else
                echo "<br /><img src="/images/$NAME.jpg" /><br />"
                echo "Name parameter set to '$NAME', showing $NAME cat"
        fi
fi
```

EXHIBIT E

Multiple Web Site Page Change Demonstration

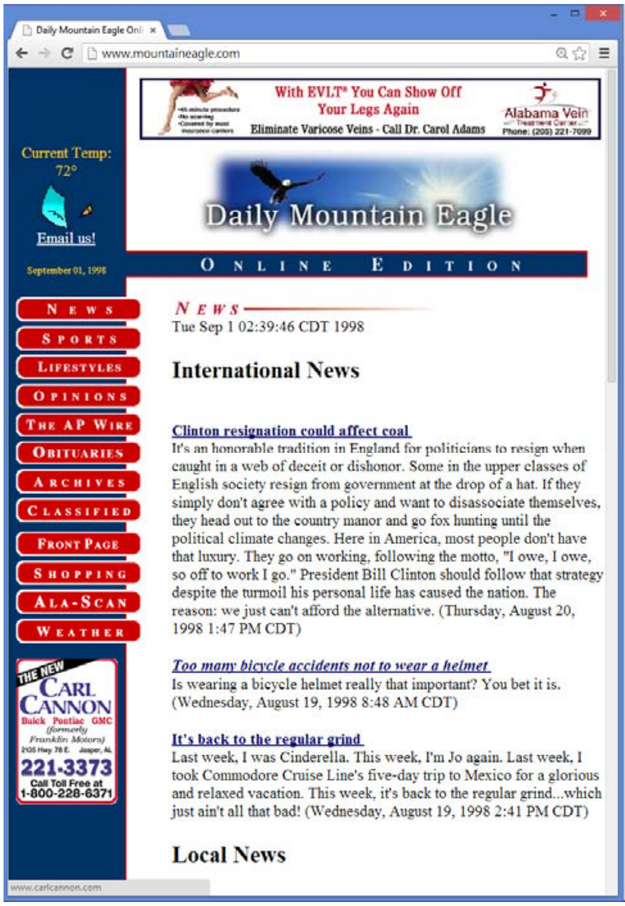
Object library

```
[all]
headerbar_wrapper^env REQUEST_METHOD=GET
QUERY_STRING=DBNAME=eagle.news+HEAD=none+LOOP=index_loop.html+SF=key+SV=01
06667+pg_len=1 /usr/WWW/bin/searchb^cgi
main_css^echo "<link rel=\"stylesheet\" type=\"text/css\" href=\"/css/global.css\">"^cgi
…
[bolivar]
logo_bar^env REQUEST_METHOD=GET
QUERY_STRING=DBNAME=eagle.news+HEAD=none+LOOP=index_loop.html+SF=key+SV=01
06662+pg_len=1 /usr/WWW/bin/searchb^cgi
ad_bar^env REQUEST_METHOD=GET
QUERY_STRING=DBNAME=eagle.news+HEAD=none+LOOP=index_loop.html+SF=key+SV=01
06663+pg_len=1 /usr/WWW/bin/searchb^cgi
site_css^echo "<link rel=\"stylesheet\" type=\"text/css\" href=\"/css/bolivar.css\">"^cgi
…
[eagle]
logo_bar^logo_bar.html^file
ad_bar^ad_bar.html^file
site_css^echo "<link rel=\"stylesheet\" type=\"text/css\" href=\"/css/eagle.css\">"^cgi
…
```

Note: For brevity, I am showing only those objects in the Object Library that are specifically used in this demonstration. The full object library provided by Walls New Media contained many additional objects and is available unmodified in the original production. Also note that we have retained the original global (i.e., [all]) and site specific (i.e., [bolivar] and [eagle]) hierarchical structure of the original Walls New Media Object Library.

Before Change

Form of web site has banner advertisements above the Newspaper logo.



News

Tue Sep 1 02:39:46 CDT 1998

International News

Clinton resignation could affect coal

It's an honorable tradition in England for politicians to resign when caught in a web of deceit or dishonor. Some in the upper classes of English society resign from government at the drop of a hat. If they simply don't agree with a policy and want to disassociate themselves, they head out to the country manor and go fox hunting until the political climate changes. Here in America, most people don't have that luxury. They go on working, following the motto, "I owe, I owe, so off to work I go." President Bill Clinton should follow that strategy despite the turmoil his personal life has caused the nation. The reason: we just can't afford the alternative. (Thursday, August 20, 1998 1:47 PM CDT)

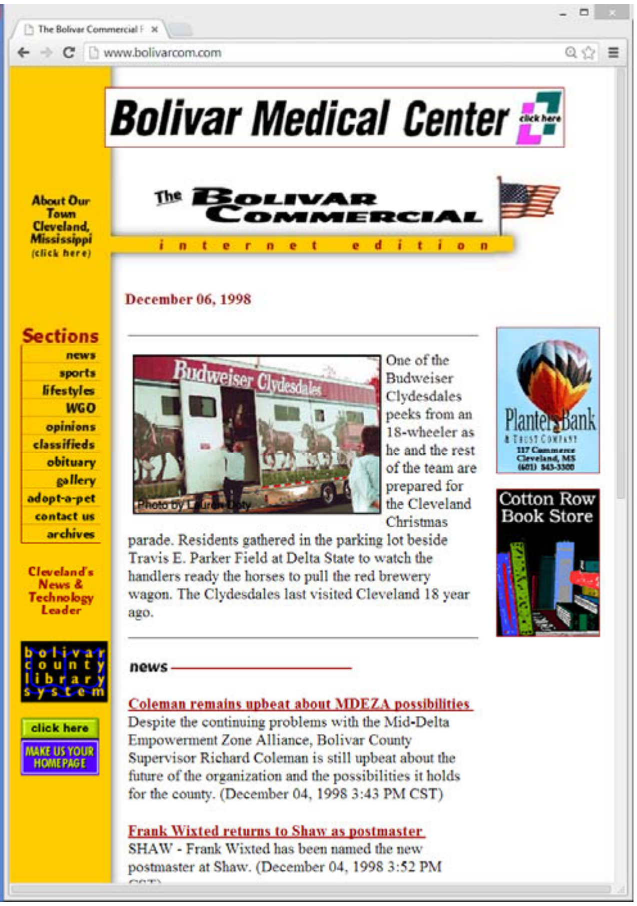
Too many bicycle accidents not to wear a helmet

Is wearing a bicycle helmet really that important? You bet it is. (Wednesday, August 19, 1998 8:48 AM CDT)

It's back to the regular grind

Last week, I was Cinderella. This week, I'm Jo again. Last week, I took Commodore Cruise Line's five-day trip to Mexico for a glorious and relaxed vacation. This week, it's back to the regular grind...which just ain't all that bad! (Wednesday, August 19, 1998 2:41 PM CDT)

Local News



December 06, 1998

One of the Budweiser Clydesdales peeks from an 18-wheeler as he and the rest of the team are prepared for the Cleveland Christmas parade. Residents gathered in the parking lot beside Travis E. Parker Field at Delta State to watch the handlers ready the horses to pull the red brewery wagon. The Clydesdales last visited Cleveland 18 year ago.

news

Coleman remains upbeat about MDEZA possibilities

Despite the continuing problems with the Mid-Delta Empowerment Zone Alliance, Bolivar County Supervisor Richard Coleman is still upbeat about the future of the organization and the possibilities it holds for the county. (December 04, 1998 3:43 PM CST)

Frank Wixted returns to Shaw as postmaster

SHAW - Frank Wixted has been named the new postmaster at Shaw. (December 04, 1998 3:52 PM CST)

Perform change to single object

Object headerbar_wrapper before change (as independently defined in database):

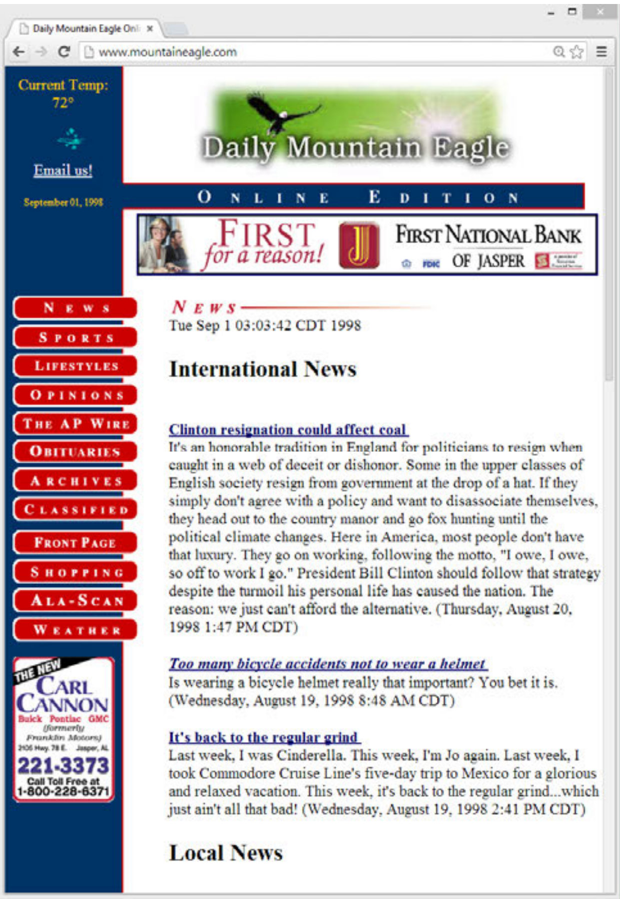
```
#ad_bar#
#logo_bar#
```

Object headerbar_wrapper after change made to object (through update to database):

```
#logo_bar#
#ad_bar#
```

After change to single object

After the single object change to headerbar_wrapper, the ads are moved below the site logos on all sites.



NEWS

Tue Sep 1 03:03:42 CDT 1998

International News

Clinton resignation could affect coal

It's an honorable tradition in England for politicians to resign when caught in a web of deceit or dishonor. Some in the upper classes of English society resign from government at the drop of a hat. If they simply don't agree with a policy and want to disassociate themselves, they head out to the country manor and go fox hunting until the political climate changes. Here in America, most people don't have that luxury. They go on working, following the motto, "I owe, I owe, so off to work I go." President Bill Clinton should follow that strategy despite the turmoil his personal life has caused the nation. The reason: we just can't afford the alternative. (Thursday, August 20, 1998 1:47 PM CDT)

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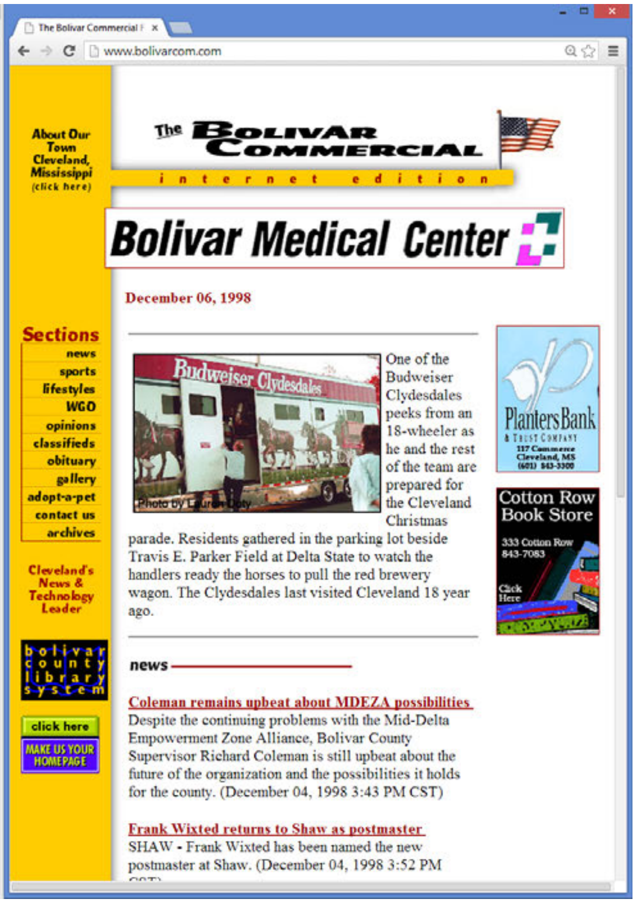
Local News



December 06, 1998

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Demonstration of single object change applied to multiple pages within a Single Web site (Daily Mountain Eagle) without affecting other Web sites

Style sheet eagle.css before change (accessed through object site_css):

```
body {  }
```

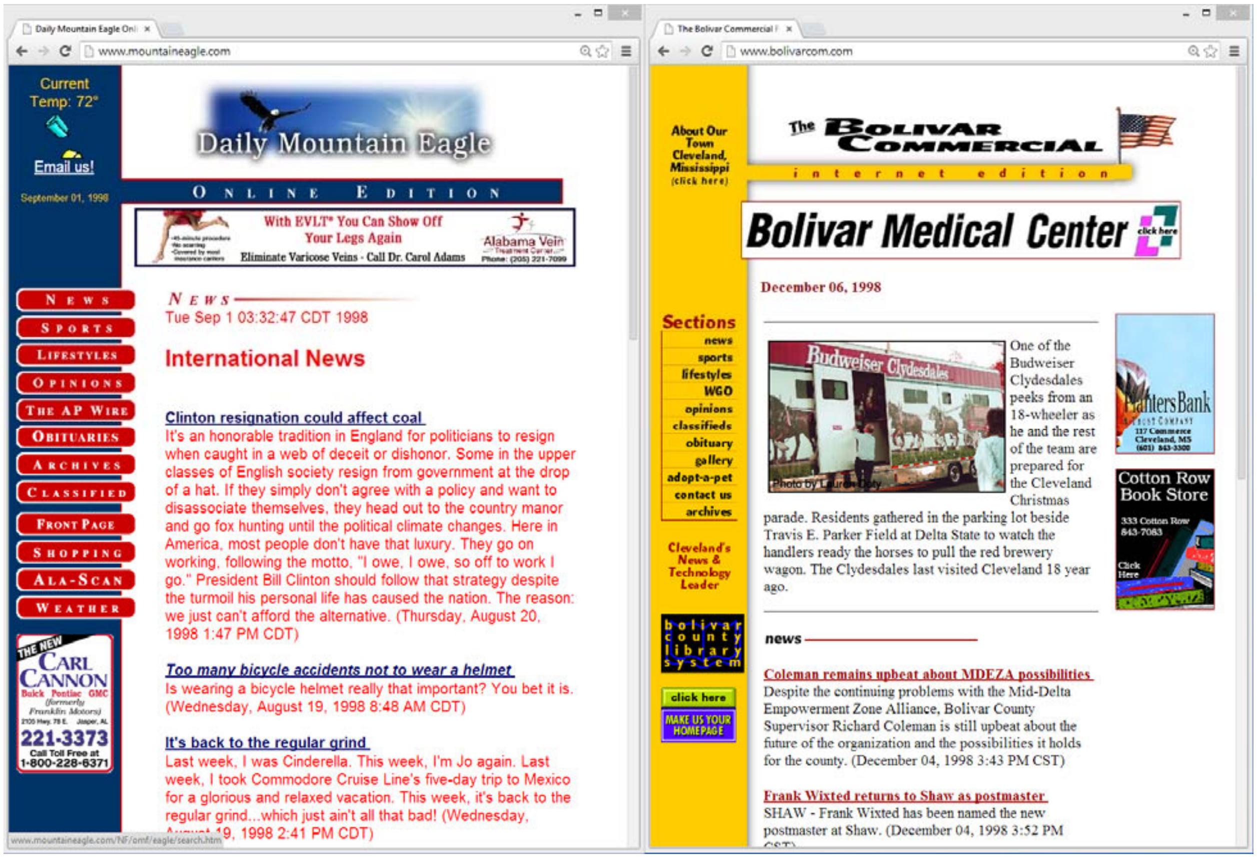
Style sheet eagle.css after change (accessed through object site_css):

```
body { color: red; font-family:helvetica, arial; }
```

Note: Each individual Web site has its own defined site_css object within the Object Library.

Results After Change

This single change modified the form (fonts and colors) on multiple pages within the Daily Mountain Eagle Web site. At the same time, this change did not modify anything relating to the Bolivar site.



NEWS

Tue Sep 1 03:32:47 CDT 1998

International News

Clinton resignation could affect coal

It's an honorable tradition in England for politicians to resign when caught in a web of deceit or dishonor. Some in the upper classes of English society resign from government at the drop of a hat. If they simply don't agree with a policy and want to disassociate themselves, they head out to the country manor and go fox hunting until the political climate changes. Here in America, most people don't have that luxury. They go on working, following the motto, "I owe, I owe, so off to work I go." President Bill Clinton should follow that strategy despite the turmoil his personal life has caused the nation. The reason: we just can't afford the alternative. (Thursday, August 20, 1998 1:47 PM CDT)

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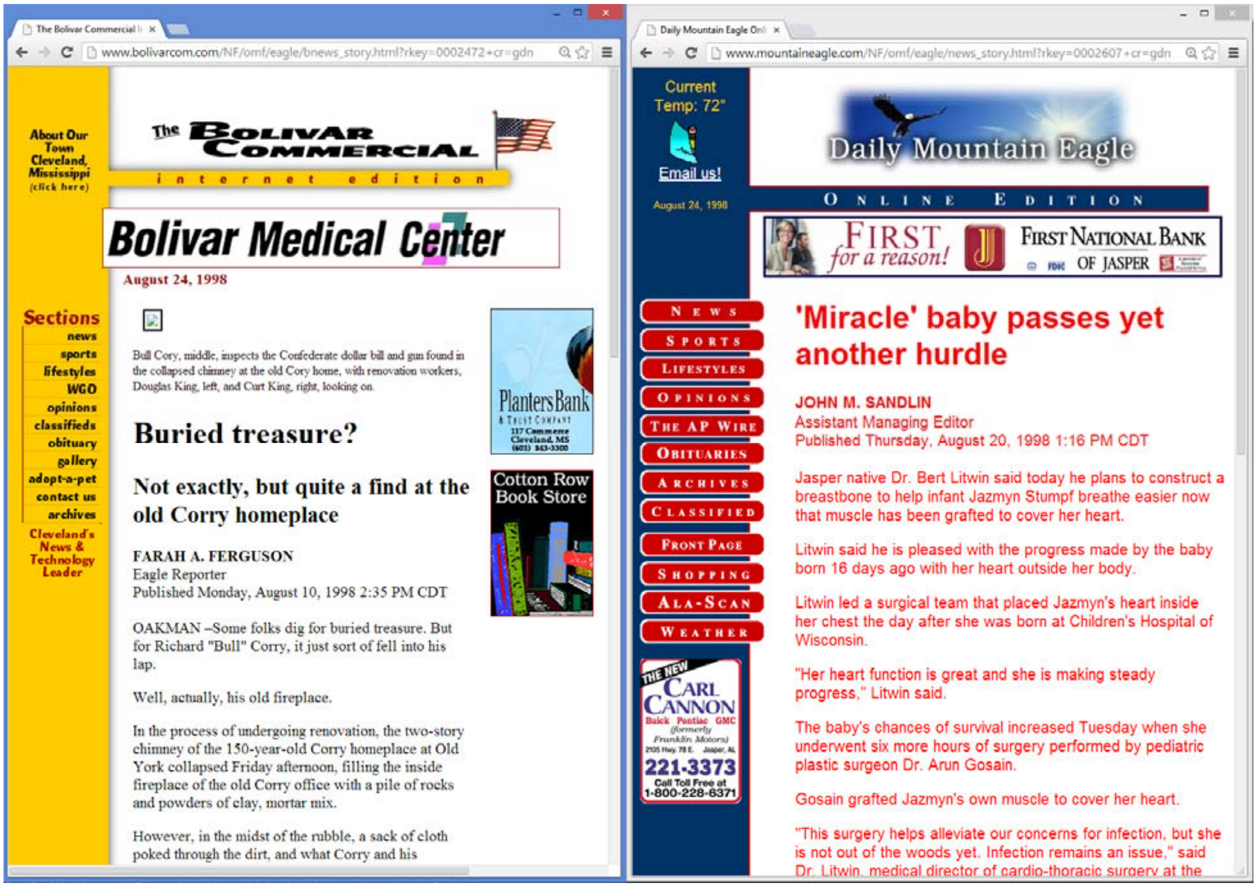
Secondary Web pages on both Daily Mountain Eagle and Bolivar appropriately reflect the change as well (i.e., Eagle reflects changes and Bolivar reflects no changes)


The Bolivar Commercial I
www.bolivarcom.com/NF/omf/eagle/bnews_story.html?rkey=0002472+cr=gdn
About Our Town Cleveland, Mississippi (click here)
The Bolivar Commercial
internet edition
Bolivar Medical Center
Sections
news
sports
lifestyles
WGO
opinions
classifieds
obituary
gallery
adopt-a-pet
contact us
archives
Cleveland's News & Technology Leader
PlantersBank & Trust Company 117 Commerce Cleveland, MS (601) 843-3300
Cotton Row Book Store
Daily Mountain Eagle Onl
www.mountaineagle.com/NF/omf/eagle/news_story.html?rkey=0002607+cr=gdn
Current Temp: 72°
Email us!
August 24, 1998
Daily Mountain Eagle
Online Edition
FIRST for a reason!
First National Bank of Jasper
News
Sports
Lifestyles
Opinions
The AP Wire
Obituaries
Archives
Classified
Front Page
Shopping
Ala-Scan
Weather
The New Carl Cannon Buick Pontiac GMC (formerly Franklin Motors) 2105 Hwy. 78 E. Jasper, AL 221-3373 Call Toll Free at 1-800-228-6371

August 24, 1998

Bull Cory, middle, inspects the Confederate dollar bill and gun found in the collapsed chimney at the old Cory home, with renovation workers, Douglas King, left, and Curt King, right, looking on.

Buried treasure?

Not exactly, but quite a find at the old Corry homeplace

FARAH A. FERGUSON
Eagle Reporter
Published Monday, August 10, 1998 2:35 PM CDT

OAKMAN –Some folks dig for buried treasure. But for Richard "Bull" Corry, it just sort of fell into his lap.

Well, actually, his old fireplace.

In the process of undergoing renovation, the two-story chimney of the 150-year-old Corry homeplace at Old York collapsed Friday afternoon, filling the inside fireplace of the old Corry office with a pile of rocks and powders of clay, mortar mix.

However, in the midst of the rubble, a sack of cloth poked through the dirt, and what Corry and his

'Miracle' baby passes yet another hurdle

JOHN M. SANDLIN
Assistant Managing Editor
Published Thursday, August 20, 1998 1:16 PM CDT

Jasper native Dr. Bert Litwin said today he plans to construct a breastbone to help infant Jazmyn Stumpf breathe easier now that muscle has been grafted to cover her heart.

Litwin said he is pleased with the progress made by the baby born 16 days ago with her heart outside her body.

Litwin led a surgical team that placed Jazmyn's heart inside her chest the day after she was born at Children's Hospital of Wisconsin.

"Her heart function is great and she is making steady progress," Litwin said.

The baby's chances of survival increased Tuesday when she underwent six more hours of surgery performed by pediatric plastic surgeon Dr. Arun Gosain.

Gosain grafted Jazmyn's own muscle to cover her heart.

"This surgery helps alleviate our concerns for infection, but she is not out of the woods yet. Infection remains an issue," said Dr. Litwin, medical director of cardio-thoracic surgery at the

Another Multiple Web site Page Change Demonstration

Style sheet Global.css before change (accessed through main_css)

```
#sidebar {  }
```

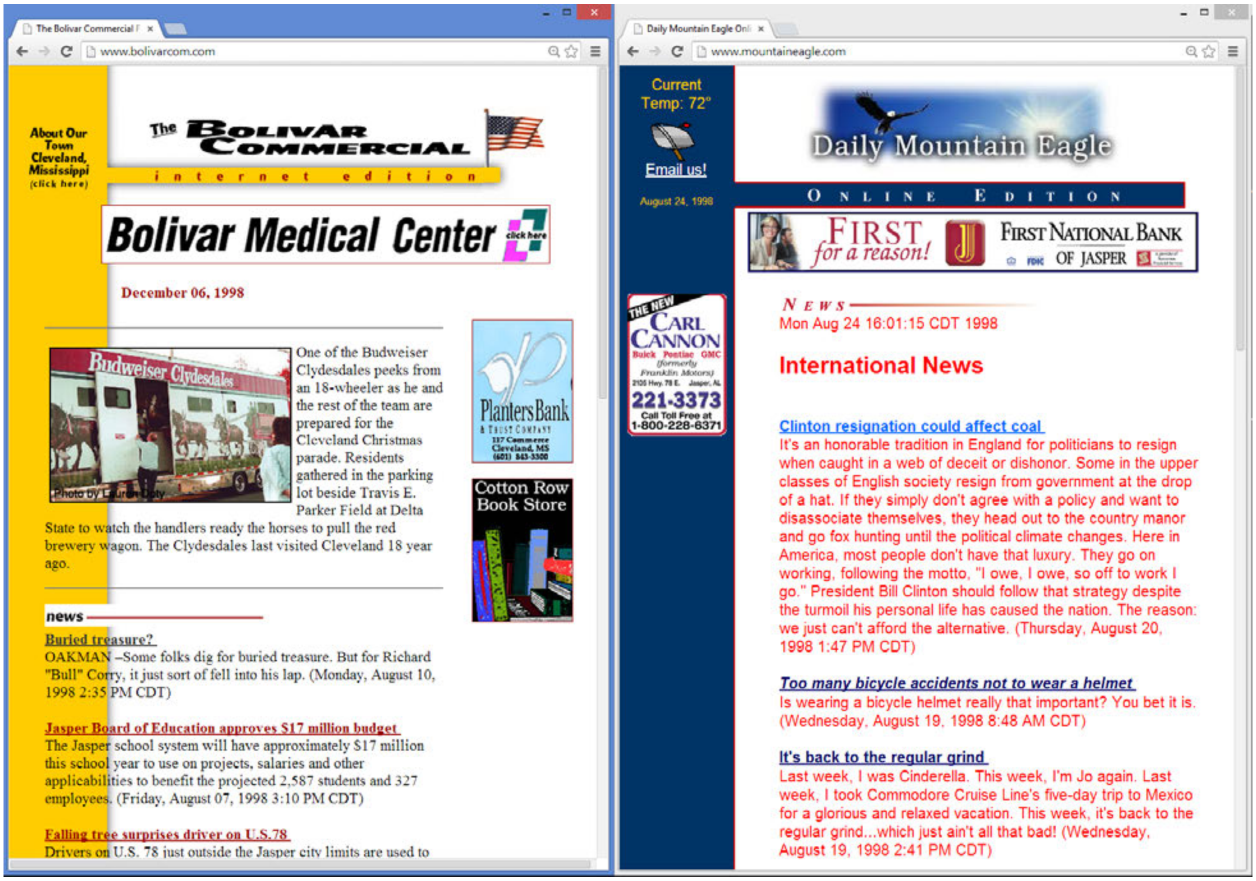
Style sheet Global.css after change (accessed through main_css)

```
#sidebar { display: none; }
```

Note: The main_css object is defined within the global/[all] section of the Object Library hierarchical structure.

Results After change

This single change modified the form (layout) on multiple pages on multiple Web sites by removing the navigation menu.



December 06, 1998

One of the Budweiser Clydesdales peeks from an 18-wheeler as he and the rest of the team are prepared for the Cleveland Christmas parade. Residents gathered in the parking lot beside Travis E. Parker Field at Delta State to watch the handlers ready the horses to pull the red brewery wagon. The Clydesdales last visited Cleveland 18 year ago.

news

Buried treasure?
OAKMAN –Some folks dig for buried treasure. But for Richard "Bull" Corry, it just sort of fell into his lap. (Monday, August 10, 1998 2:35 PM CDT)

Jasper Board of Education approves $17 million budget
The Jasper school system will have approximately $17 million this school year to use on projects, salaries and other applicabilities to benefit the projected 2,587 students and 327 employees. (Friday, August 07, 1998 3:10 PM CDT)

Falling tree surprises driver on U.S.78
Drivers on U.S. 78 just outside the Jasper city limits are used to

News
Mon Aug 24 16:01:15 CDT 1998

International News

Clinton resignation could affect coal
It's an honorable tradition in England for politicians to resign when caught in a web of deceit or dishonor. Some in the upper classes of English society resign from government at the drop of a hat. If they simply don't agree with a policy and want to disassociate themselves, they head out to the country manor and go fox hunting until the political climate changes. Here in America, most people don't have that luxury. They go on working, following the motto, "I owe, I owe, so off to work I go." President Bill Clinton should follow that strategy despite the turmoil his personal life has caused the nation. The reason: we just can't afford the alternative. (Thursday, August 20, 1998 1:47 PM CDT)

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Demonstration of Dynamic Web Repurposing

The following demonstrates the quick and efficient repurposing of the Bolivar Web site (as shown above) to a completely new Web site called valley_times. The new site continues to utilize shared objects with other Web sites as well as other objects that are specific to the new site.

The following straightforward steps are all that is required to fully repurpose the Bolivar Web site:

Step 1: Configure Apache

Add the following lines to /local1/apache/conf/httpd.conf:

```
<VirtualHost *:80>
ServerName www.valleytimes-news.com
DocumentRoot  /local1/apache_htdocs/valley_times/
DirectoryIndex index.cgi index.html
ErrorLog /local1/weblogs/www.valleytimes-news.com-error_log
TransferLog /local1/weblogs/www.valleytimes-news.com-access_log
ScriptAlias /NF/ /usr/WWW/bin/
ScriptAlias /NFadmin/ /usr/WWW/admin-bin/
ScriptAlias /index.cgi /local1/apache_htdocs/valley_times/index.cgi

<Directory "/usr/WWW/bin">
    AllowOverride None
    Options None
    Order allow,deny
    Allow from all
</Directory>

<Directory "/usr/WWW/admin-bin">
AllowOverride AuthConfig
    Options None
    Order allow,deny
    Allow from all
</Directory>

<Directory "/local1/apache_htdocs/valleytimes-news">
    AllowOverride None
    Options Indexes FollowSymLinks ExecCGI
     Order allow,deny
    Allow from all
</Directory>

</VirtualHost>
```

Step 2: Repurpose relevant materials (some shared some not based upon Bolivar)

First, we copy the directory containing site specific WebOS container pages:

```
cd /local1/web/htdocs/
cp -R bolivar valley_times
```

Then we copy the directory containing the startup pages that Apache uses with WebOS:

```
cp -R /local1/apache_htdocs/bolivar /local1/apache_htdocs/valley_times
```

Then modify index.cgi to point to the proper container files directory:

```
#! /bin/sh
env REQUEST_METHOD=GET QUERY_STRING=PATH_INFO=/bolivar/index.html
/usr/WWW/bin/omf
```

Then we copy the configuration we want to start with:

```
cd /local1/WWW/WebOS/configs/
cp -R bolivar valley_times
```

Then we configure WebOS by adding the following lines to webos.config (which can be an edited version of the Bolivar site information):

```
valley_times {
      site_id         = valley_times
      site_root_path  = /usr/WWW/WebOS/configs/
      site_config_dir = valley_times/
      site_config     = site.config
      site_admin      = dmeadmin
      document_root   = /usr/web/htdocs/eagle/
      server_url      = http://www.valleytimes-news.com/
      max_entries     = 100000
      db_enabled      = Y
      omf_enabled     = Y
      shop_enabled    = N
      nph_enabled     = N
      post_enabled    = Y
      studio_enabled  = Y
      admgr_enabled   = Y
}
```

Then we restart Apache so it recognizes our changes:

```
/local1/apache/bin/apachectl restart/local1/apache/bin/apachectl restart
```

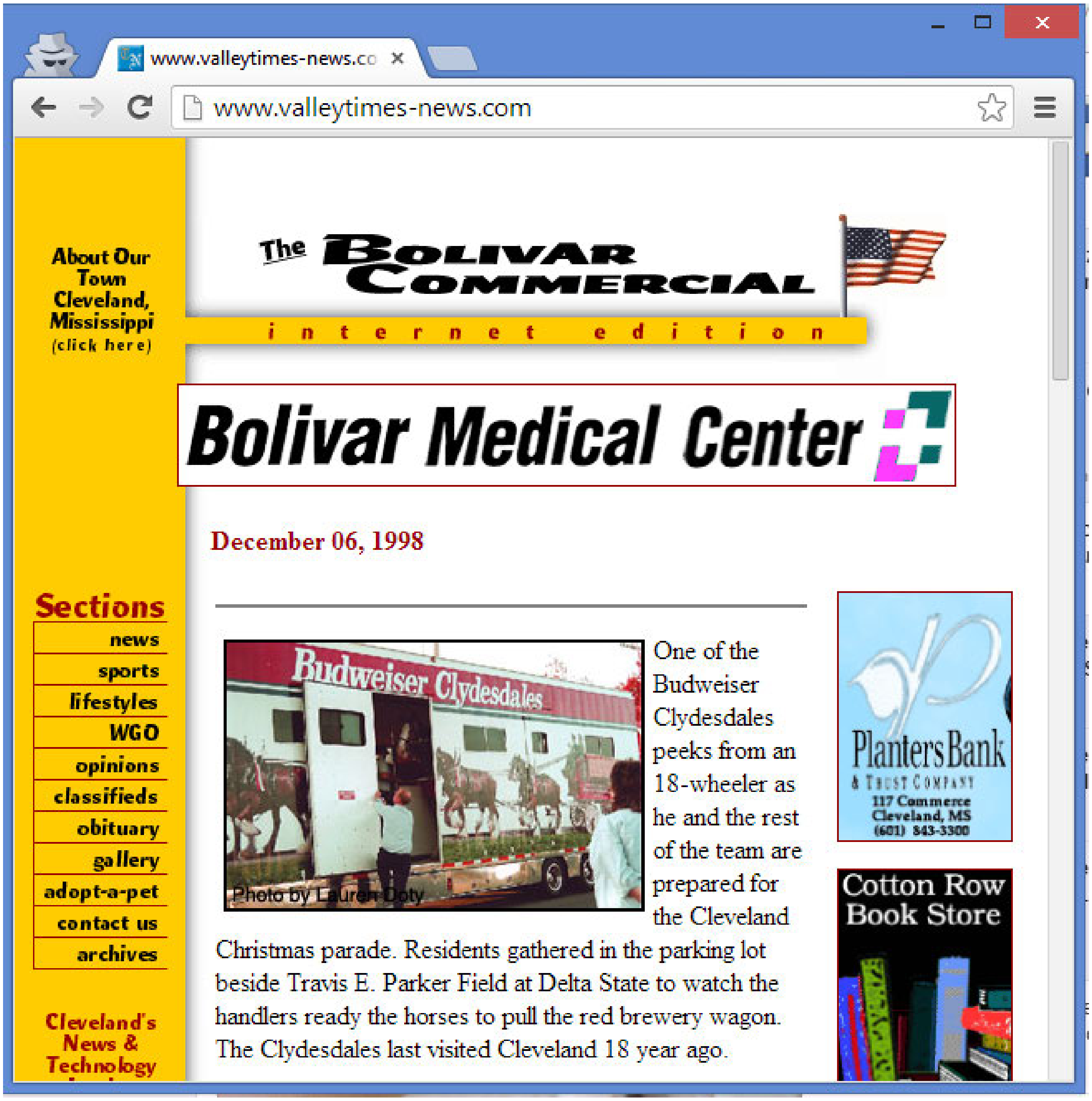
Then we repurpose the Bolivar site specific objects for valley_times within the shared Object Library (i.e., object_library.lib) used by all Web sites:

```
[valley_times]
site_css^echo "<link rel=\"stylesheet\" type=\"text/css\" href=\"/css/bolivar.css\">"^cgi
header^env REQUEST_METHOD=GET
QUERY_STRING=DBNAME=eagle.news+HEAD=none+LOOP=index_loop.html+SF=key+SV=01
06661+pg_len=1 /usr/WWW/bin/searchb^cgi
logo_bar^env REQUEST_METHOD=GET
QUERY_STRING=DBNAME=eagle.news+HEAD=none+LOOP=index_loop.html+SF=key+SV=01
06662+pg_len=1 /usr/WWW/bin/searchb^cgi
ad_bar^env REQUEST_METHOD=GET
QUERY_STRING=DBNAME=eagle.news+HEAD=none+LOOP=index_loop.html+SF=key+SV=01
06663+pg_len=1 /usr/WWW/bin/searchb^cgi
image_swap_js^image_swap_js.html^file
todays_date^env REQUEST_METHOD=GET
QUERY_STRING=DBNAME=eagle.news+HEAD=none+LOOP=index_loop.html+SF=key+SV=01
06664+pg_len=1 /usr/WWW/bin/searchb^cgi
footer^env REQUEST_METHOD=GET
QUERY_STRING=DBNAME=eagle.news+HEAD=none+LOOP=index_loop.html+SF=key+SV=01
06665+pg_len=1 /usr/WWW/bin/searchb^cgi
body^env REQUEST_METHOD=GET
QUERY_STRING=DBNAME=eagle.news+HEAD=none+LOOP=index_loop.html+SF=key+SV=01
06666+pg_len=1 /usr/WWW/bin/searchb^cgi
news_front^env REQUEST_METHOD=GET
QUERY_STRING=DBNAME=eagle.news+HEAD=none+LOOP=frontnews_loop.html+SF=categ
ory\&story_date+SV=news]{41d}{}+SORT=\!story_date]priority
+SCORE=n+pg_len=3 /usr/WWW/bin/searchb^cgi
```

Note: No changes are necessary to the Object Library for the shared global objects, which are already part of the shared Object Library. They remain unchanged and are fully functional in the new site as they were in all other sites.

New, Repurposed Site Operational

The valleytimes-news.com page loads and shows the copied bolivar configuration. This is a new, separate Web site with both objects shared across multiple Web sites and site specific objects. All of the same changeability demonstration described above are available for this new as well.



December 06, 1998

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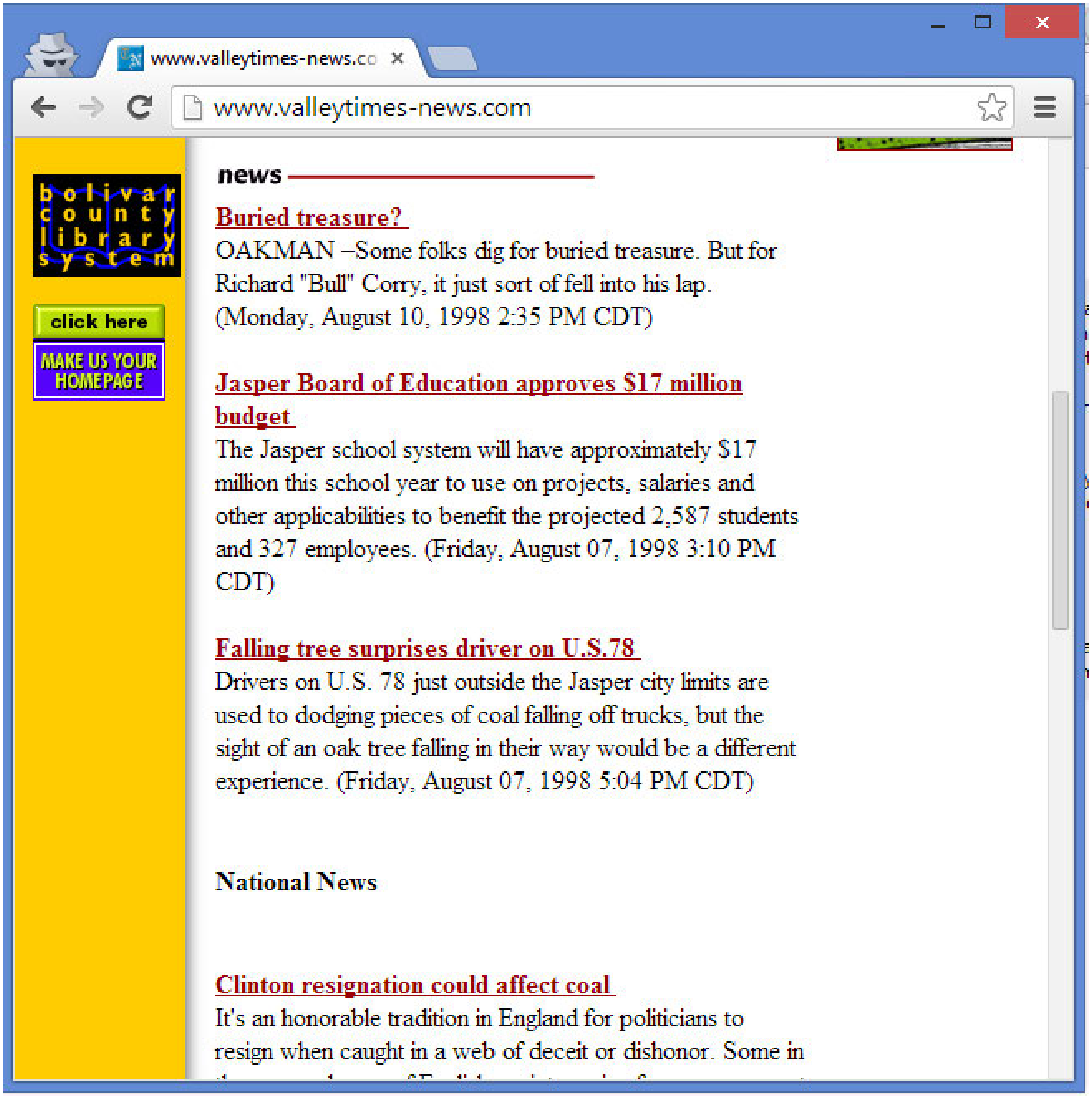
Customizing the new web site

The new site (repurposed from Bolivar) can now be customized as desired. For example, the news feed object for Bolivar is easily modified to produce Valley_times specific news. Such a change does not affect other Web sites. Here is the output before the change is made:



news

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Jasper Board of Education approves $17 million budget

The Jasper school system will have approximately $17 million this school year to use on projects, salaries and other applicabilities to benefit the projected 2,587 students and 327 employees. (Friday, August 07, 1998 3:10 PM CDT)

Falling tree surprises driver on U.S.78

Drivers on U.S. 78 just outside the Jasper city limits are used to dodging pieces of coal falling off trucks, but the sight of an oak tree falling in their way would be a different experience. (Friday, August 07, 1998 5:04 PM CDT)

National News

Clinton resignation could affect coal

It's an honorable tradition in England for politicians to resign when caught in a web of deceit or dishonor. Some in

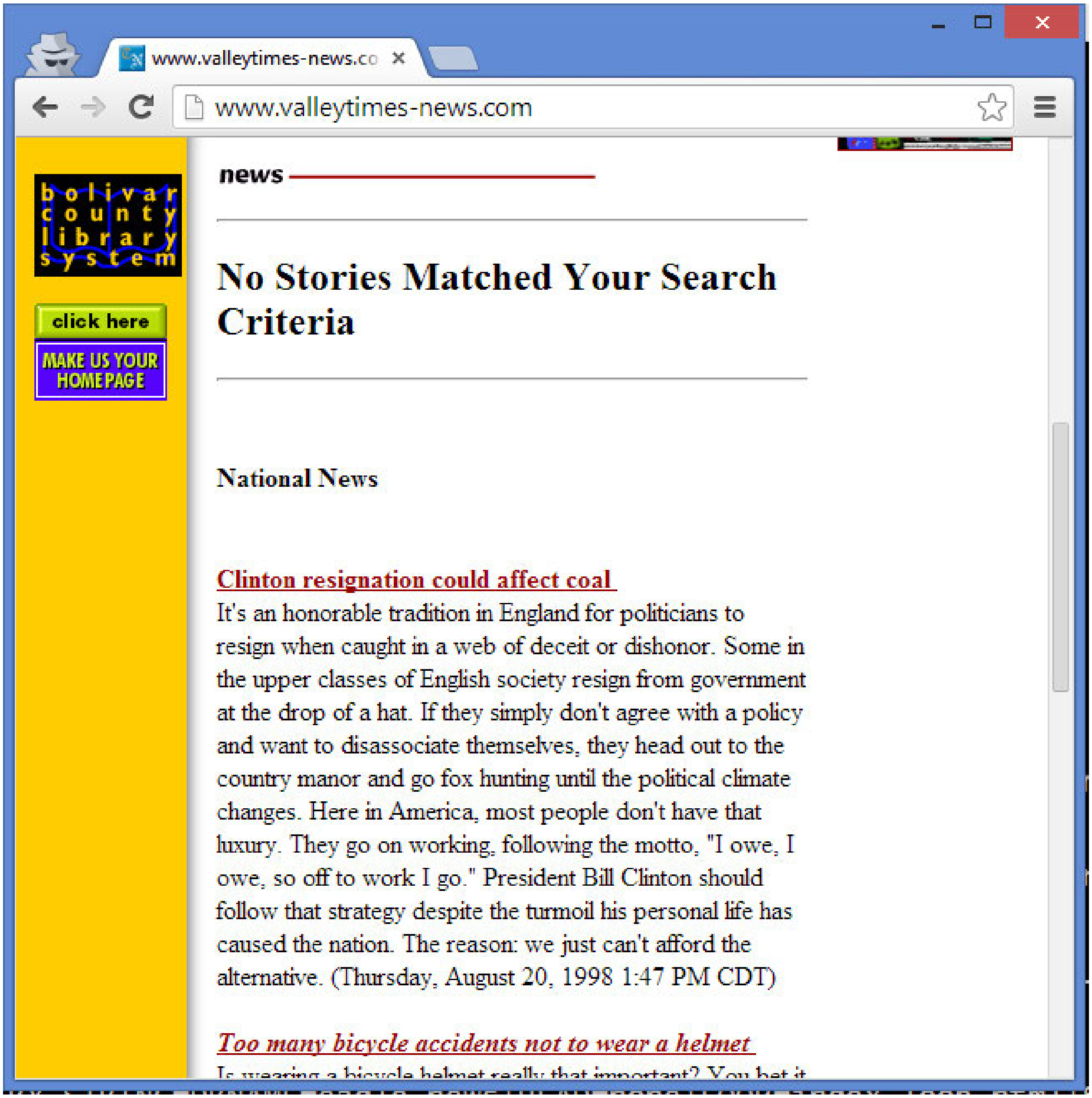
news_front object before change (in site specific section of object_library.lib)

```
news_front^env REQUEST_METHOD=GET
QUERY_STRING=DBNAME=eagle.news+HEAD=none+LOOP=frontnews_loop.html+SF=categ
ory\&story_date+SV=news]{41d}{}+SORT=\!story_date]priority+SCORE=n+pg_len=3
/usr/WWW/bin/searchb^cgi
```

news_front object after change

```
news_front^env REQUEST_METHOD=GET
QUERY_STRING=DBNAME=eagle.news+HEAD=none+LOOP=frontnews_loop.html+SF=categ
ory\&story_date+SV=valleynews]{41d}{}+SORT=\!story_date]priority+SCORE=n+pg_len=3
/usr/WWW/bin/searchb^cgi
```

After change to news_front object the news page changes to the following. Story data is initially empty.



No Stories Matched Your Search Criteria

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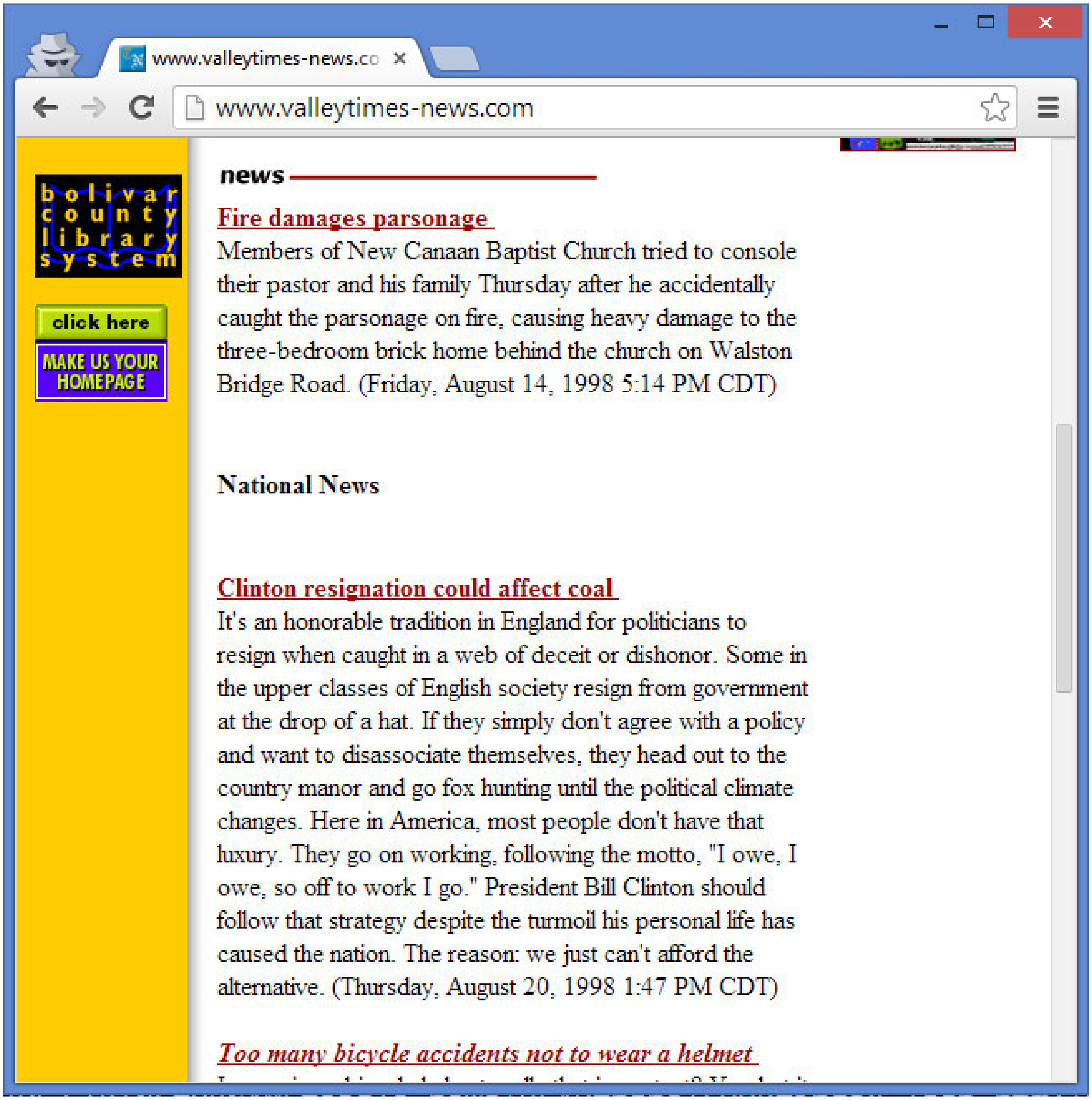
Too many bicycle accidents not to wear a helmet

Is wearing a bicycle helmet really that important? You bet it

Our news feed is still empty, but we can create a new story database entry in `/local1/WWW/WebOS/configs/eagle/eagle_db/news/data.db` with our first news story:

```
0002524^08/14/1998 17:17:14^11/27/2010 10:40:06^08/14/98 17:14:44^Y^Fire damages
parsonage^valleynews^Aug1498^JOHN M. SANDLIN^Assistant Managing
Editor^top^^1^file:/dme/sta/Aug1498/fire^fire^^Members of New Canaan Baptist Church
tried to console their pastor and his family Thursday after he accidentally caught the
parsonage on fire, causing heavy damage to the three-bedroom brick home behind the
church on Walston Bridge Road.&lt;!----&gt;^^^FIRE2^Jasper firefighters attempt to save
the church parsonage. Fire Chief Randy Dutton said the house may be a total loss. The
blaze began when cooking oil in deep-fryer ignited in the carport.^08/14/98^ 5:14 PM
CDT^^news1.html^^Friday, August 14, 1998^Fire damages parsonage^^^gdn^^^
```

After first news story is added for customized Valley Times Web Site



news

Fire damages parsonage
Members of New Canaan Baptist Church tried to console their pastor and his family Thursday after he accidentally caught the parsonage on fire, causing heavy damage to the three-bedroom brick home behind the church on Walston Bridge Road. (Friday, August 14, 1998 5:14 PM CDT)

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Too many bicycle accidents not to wear a helmet

Note: the changes only affect the new Web site (Valley times) without affecting other Web sites which are part of the shared family of multiple sites operating from a shared Object Library.